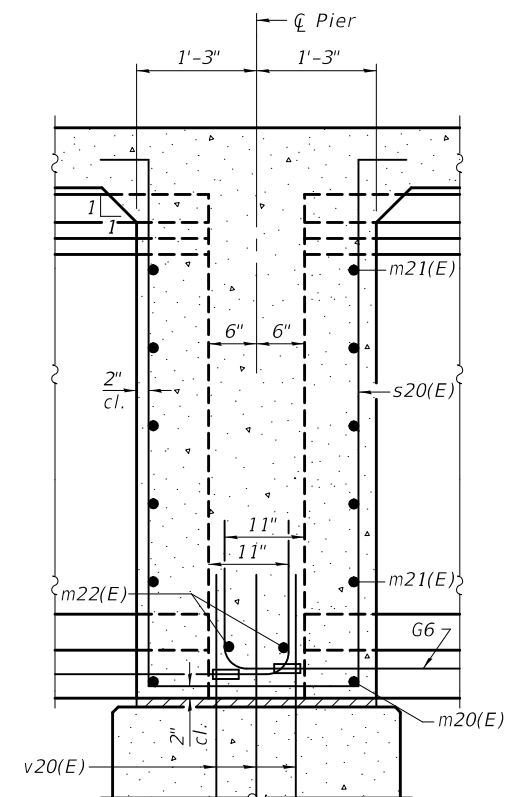


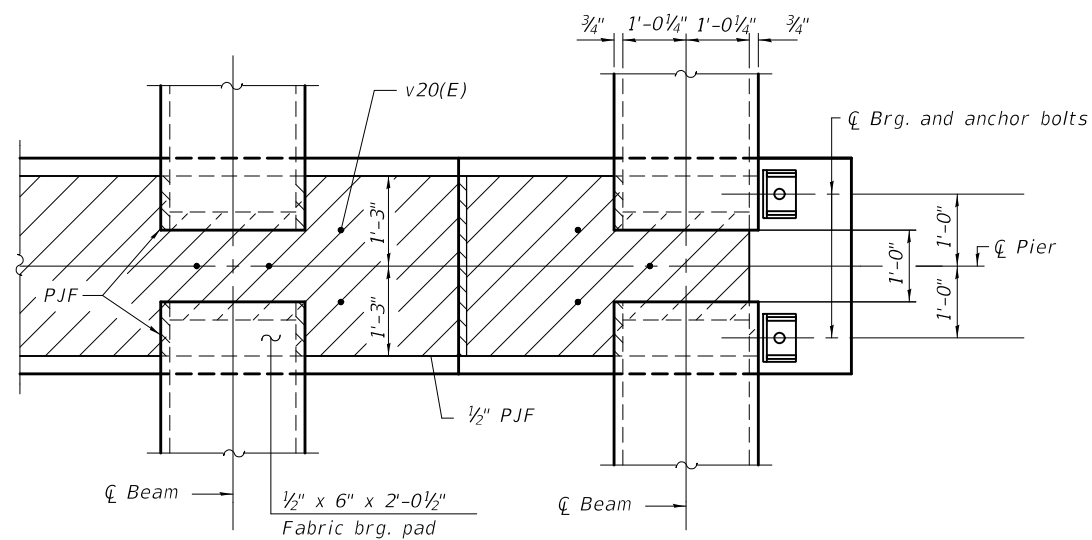
CELL / MODEL NAME	DESCRIPTION	DATE
DFP-BT6372-0	Diaphragm Fixed Pier; Bulb T-Beam 63-72 inch beam depth; No skew	2/17/2017
DFP-BT6372-L	Diaphragm Fixed Pier: Bulb T-Beam 63-72 inch beam depth; Left skew	2/17/2017
DFP-BT6372-R	Diaphragm Fixed Pier: Bulb T-Beam 63-72 inch beam depth; Right skew	2/17/2017
DFP-I3642-0	Diaphragm fixed pier; I-Beam 36-42 inch beam depth; No skew	2/17/2017
DFP-I3642-L	Diaphragm fixed pier; I-Beam 36-42 inch beam depth; Left skew	2/17/2017
DFP-I3642-R	Diaphragm fixed pier; I-Beam 36-42 inch beam depth; Right skew	2/17/2017
DFP-I4854-0	Diaphragm fixed pier; I-Beam 48-54 inch beam depth; No skew	2/17/2017
DFP-I4854-L	Diaphragm fixed pier; I-Beam 48-54 inch beam depth: Left skew	2/17/2017
DFP-I4854-R	Diaphragm fixed pier; I-Beam 48-54 inch beam depth; Right skew	2/17/2017
DFP-IL27-0	Diaphragm fixed pier; IL 27 inch beam depth; No skew	2/17/2017
DFP-IL27-L	Diaphragm fixed pier; IL 27 inch beam depth; Left skew	2/17/2017
DFP-IL27-R	Diaphragm fixed pier; IL 27 inch beam depth; Right skew	2/17/2017
DFP-IL36-0	Diaphragm fixed pier; IL 36 inch beam depth; No skew	2/17/2017
DFP-IL36-L	Diaphragm fixed pier; IL 36 inch beam depth; Left skew	2/17/2017
DFP-IL36-R	Diaphragm fixed pier; IL 36 inch beam depth; Right skew	2/17/2017
DFP-IL36N-0	Diaphragm fixed pier; IL 36 inch beam depth narrow top; No skew	2/17/2017
DFP-IL36N-L	Diaphragm fixed pier; IL 36 inch beam depth narrow top; Left skew	2/17/2017
DFP-IL36N-R	Diaphragm fixed pier; IL 36 inch beam depth narrow top; Right skew	2/17/2017
DFP-IL4554-0	Diaphragm fixed pier; IL 45-54 inch beam depth; No skew	2/17/2017
DFP-IL4554-L	Diaphragm fixed pier; IL 45-54 inch beam depth; Left skew	2/17/2017
DFP-IL4554-R	Diaphragm fixed pier; IL 45-54 inch beam depth; Right skew	2/17/2017
DFP-IL4554N-0	Diaphragm fixed pier; IL 45-54 inch beam depth narrow top; No skew	2/17/2017
DFP-IL4554N-L	Diaphragm fixed pier; IL 45-54 inch beam depth narrow top; Left skew	2/17/2017
DFP-IL4554N-R	Diaphragm fixed pier; IL 45-54 inch beam depth narrow top; Right skew	2/17/2017
DFP-IL6372-0	Diaphragm fixed pier; IL 63-72 inch beam depth; No skew	2/17/2017
DFP-IL6372-L	Diaphragm fixed pier; IL 63-72 inch beam depth; Left skew	2/17/2017
DFP-IL6372-R	Diaphragm fixed pier; IL 63-72 inch beam depth; Right skew	2/17/2017
DFP-IL6372N-0	Diaphragm fixed pier; IL 63-72 inch beam depth narrow top; No skew	2/17/2017
DFP-IL6372N-L	Diaphragm fixed pier; IL 63-72 inch beam depth narrow top; Left skew	2/17/2017
DFP-IL6372N-R	Diaphragm fixed pier; IL 63-72 inch beam depth narrow top; Right skew	2/17/2017



SECTION A-A

Notes:

Reinforcement bars in diaphragm are billy with superstructure on sheet of .
Concrete in diaphragm is included with Concrete Superstructure on sheet of .
Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
Cost of side retainer and anchor bolts shall be included with Concrete Structures.
For details of bar s20(E) see sheet of .
Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.



Technical drawing of a mechanical part, likely a bracket or support, showing dimensions and tolerances.

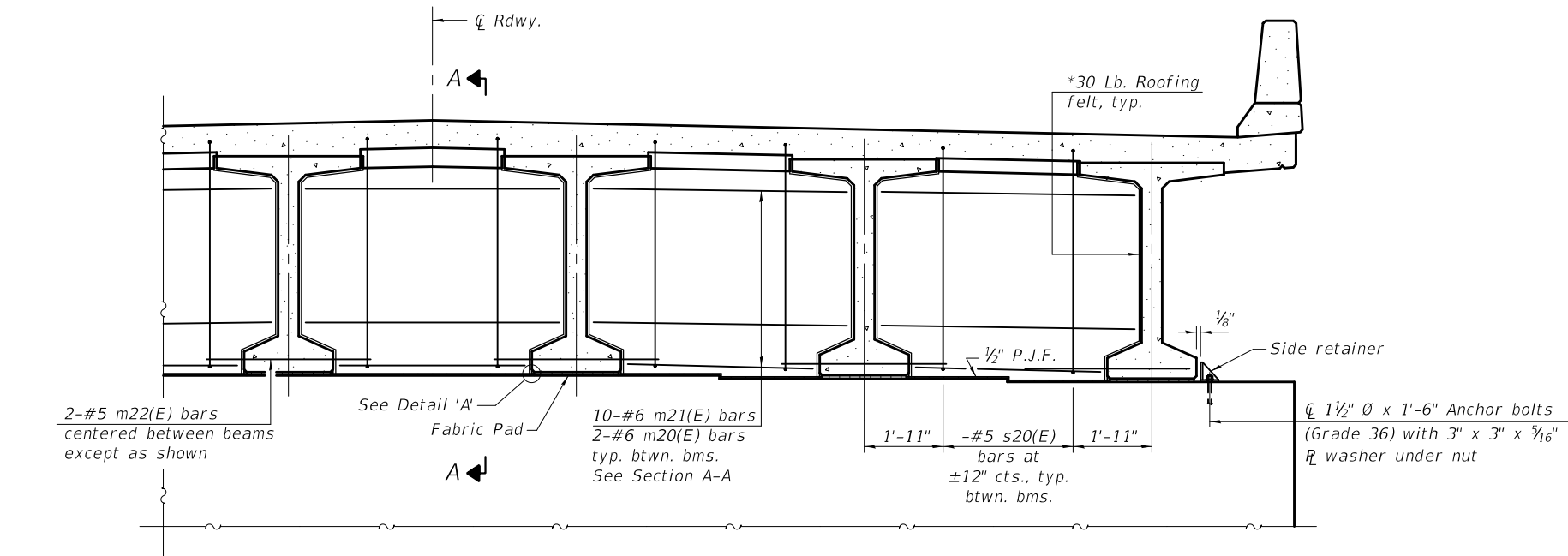
Dimensions and Tolerances:

- Top edge thickness: $\frac{1}{2}$ "
- Left edge thickness: $2\frac{3}{4}$ " (typ.)
- Central hole diameter: $\varnothing 1\frac{3}{4}$ " (typ.)
- Distance from bottom to hole center: $3\frac{1}{2}$ "
- Distance from right edge to hole center: $3\frac{1}{2}$ "
- Bottom edge thickness: $\frac{1}{2}$ "
- Overall width: $5\frac{1}{2}$ "
- Overall height: 8"
- Small feature on top edge: $\frac{5}{16}$ "

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

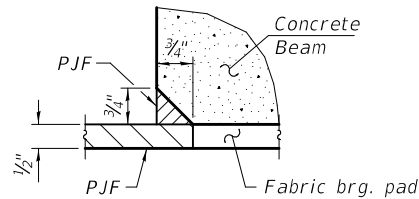
2-17-2017

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	ILLINOIS FED. AID PROJECT										

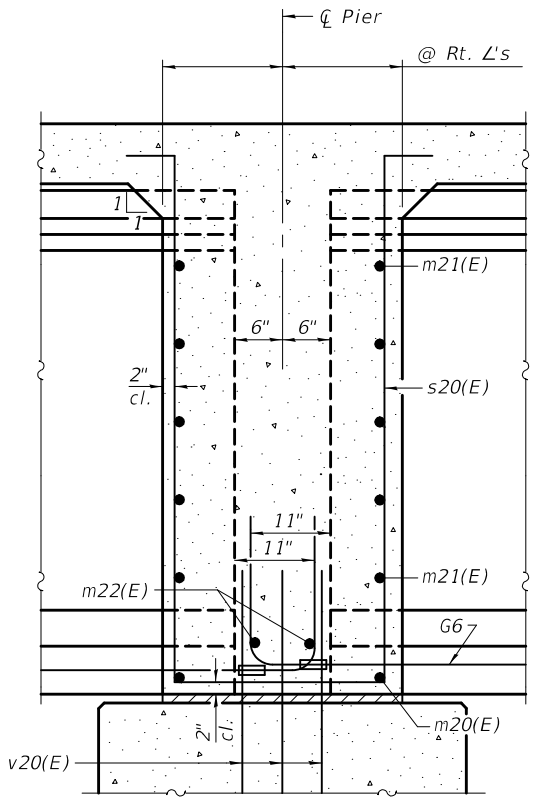


DIAPHRAGM AT PIER

*Bonded to sides of beams embedded into diaphragm.

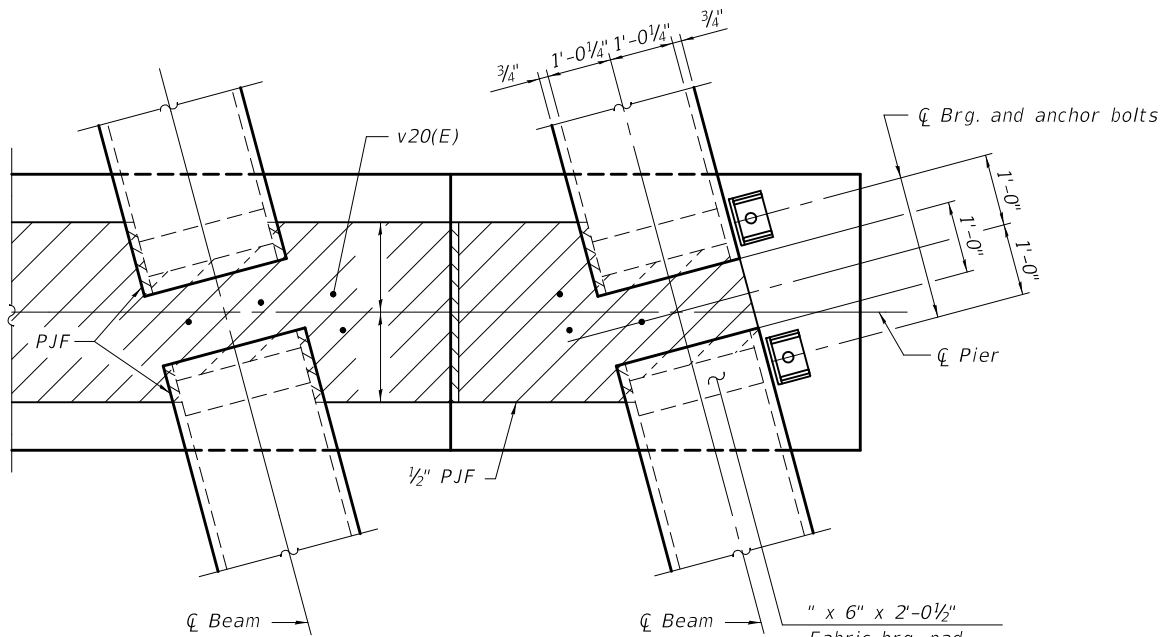


DETAIL 'A'



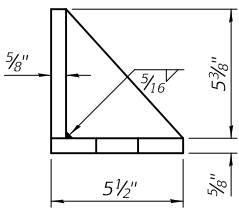
SECTION A-A

(Dimensions along ϕ of beam, except as shown)



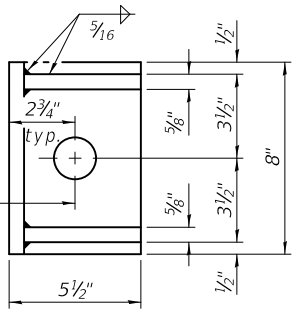
PLAN AT PIER

(Showing bearing pads and P.J.F. details)



SIDE RETAINER

(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.



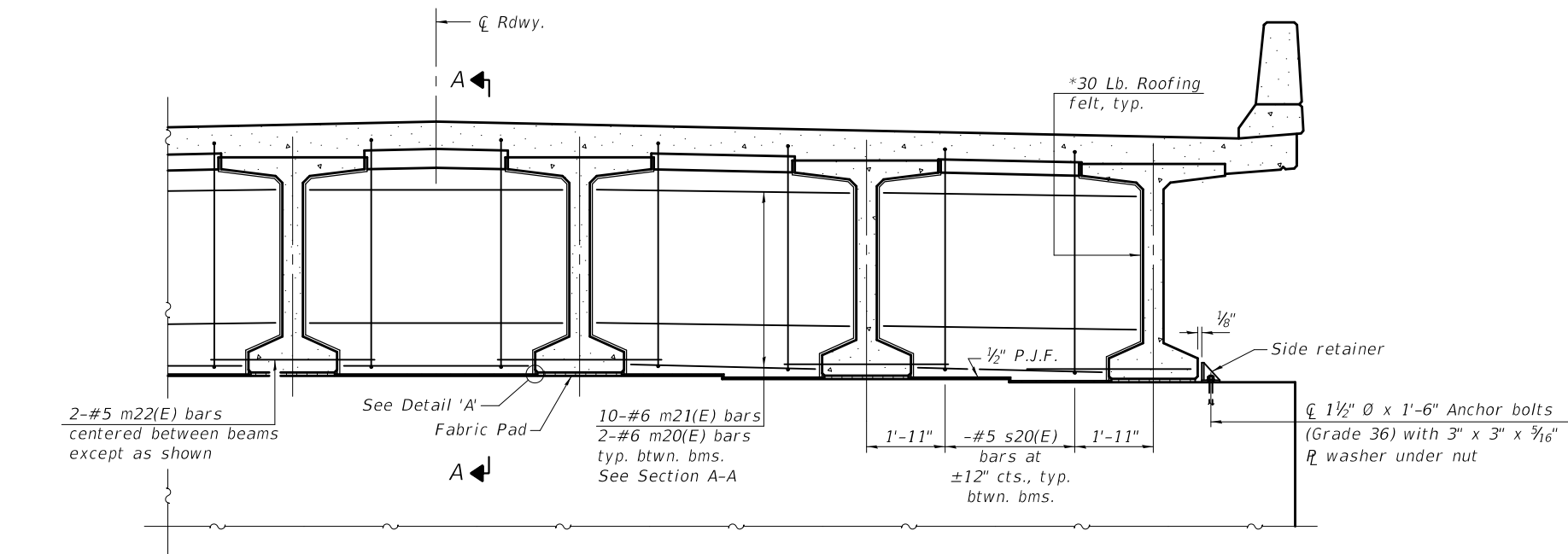
Notes:

- Reinforcement bars in diaphragm are billed with superstructure on sheet of .
- Concrete in diaphragm is included with Concrete Superstructure on sheet of .
- Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
- Cost of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar s20(E) see sheet of .
- The s20(E) bars shall be placed parallel to the beams.
- Spacing for these bars shall be at right angles to the beams.
- Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
- Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

DFP-BT-6372-L

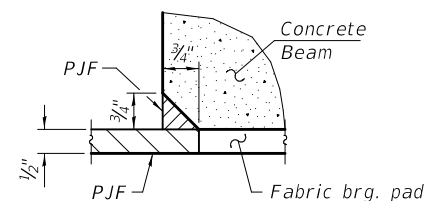
2-17-2017

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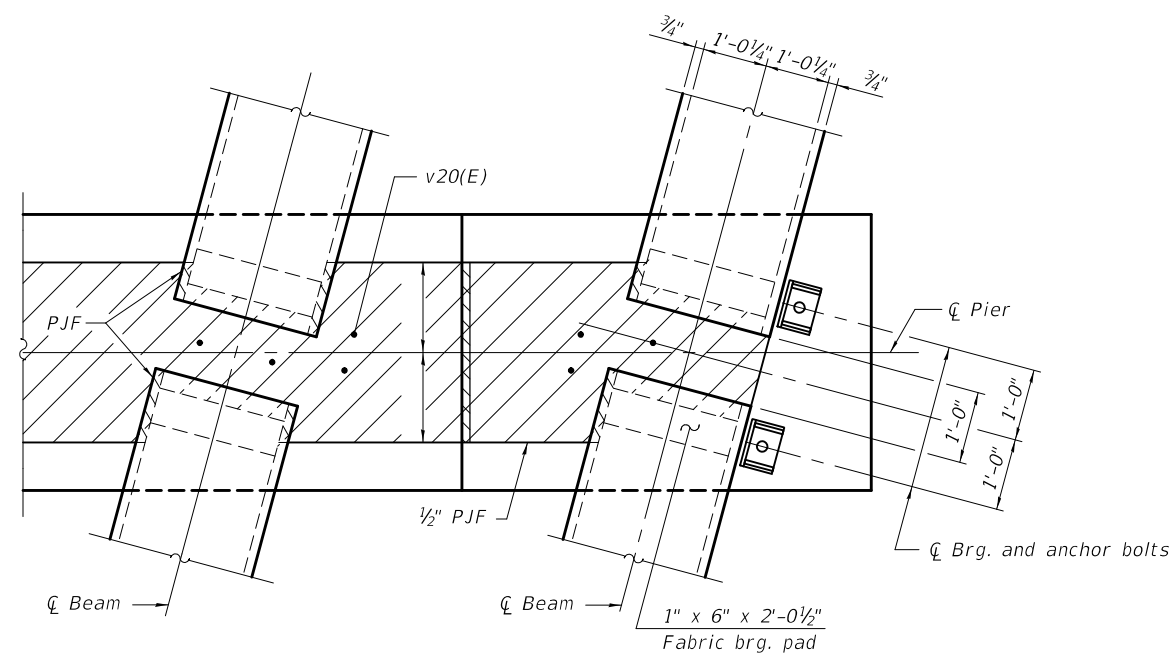


DIAPHRAGM AT PIER

*Bonded to sides of beams embedded into diaphragm.

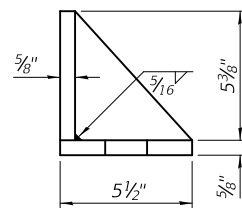


DETAIL 'A'



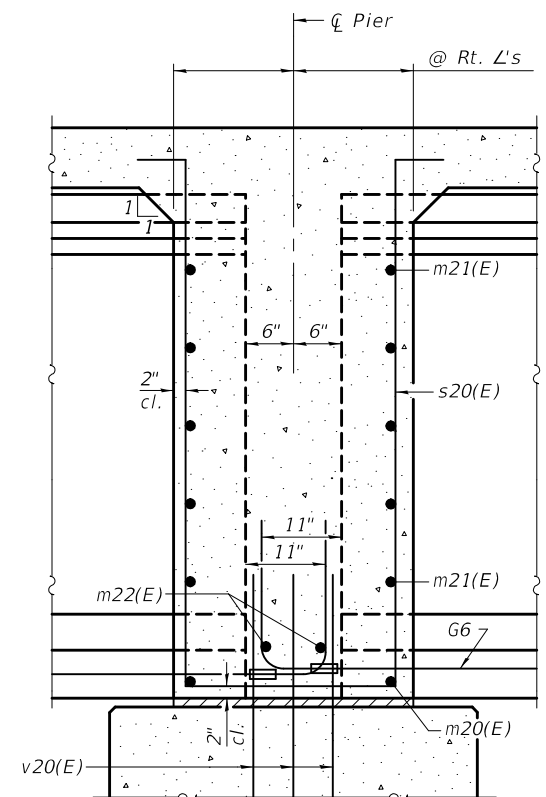
PLAN AT PIER

(Showing bearing pads and P.J.F. details)



SIDE RETAINER

(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.



SECTION A-A

(Dimensions along ϕ of beam, except as shown)

Notes:

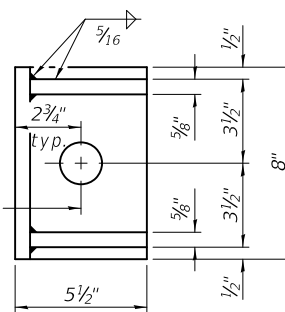
Reinforcement bars in diaphragm are billed with superstructure on sheet of .
Concrete in diaphragm is included with Concrete Superstructure on sheet of .
Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
Cost of side retainer and anchor bolts shall be included with Concrete Structures.

For details of bar s20(E) see sheet of .
The s20(E) bars shall be placed parallel to the beams.
Spacing for these bars shall be at right angles to the beams.

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.

Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

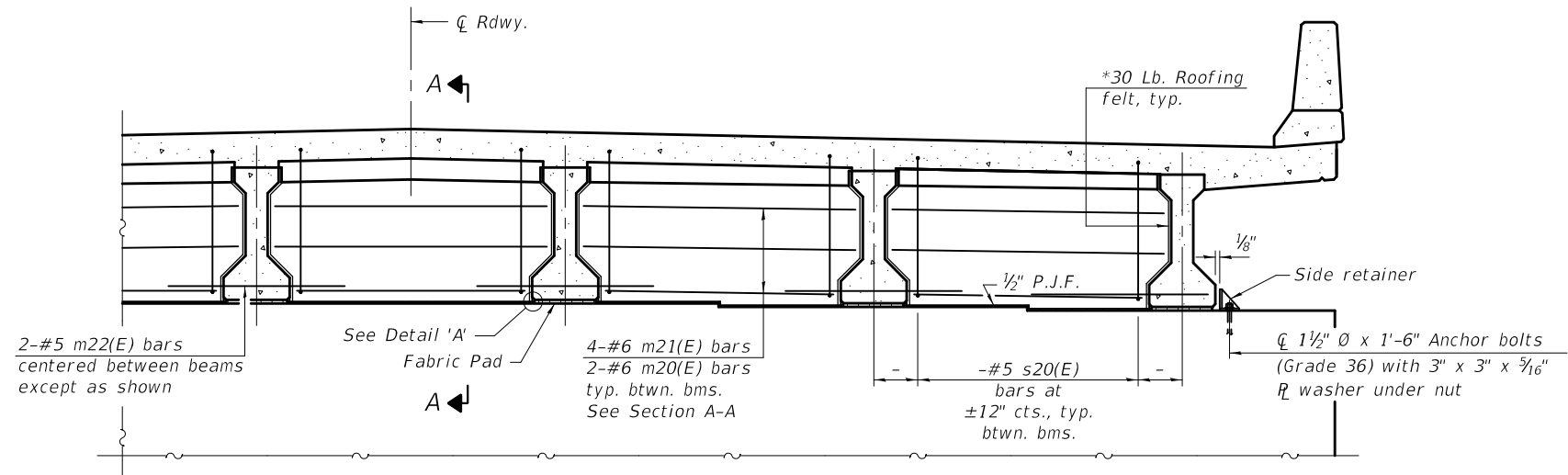
Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.



DFP-BT6372-R

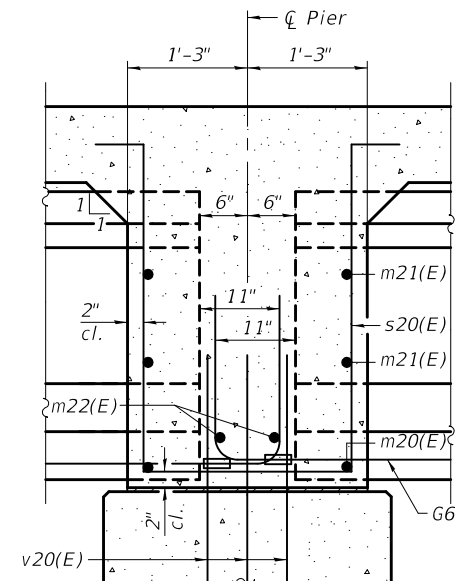
2-17-2017

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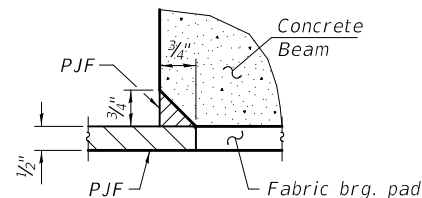


DIAPHRAGM AT PIER

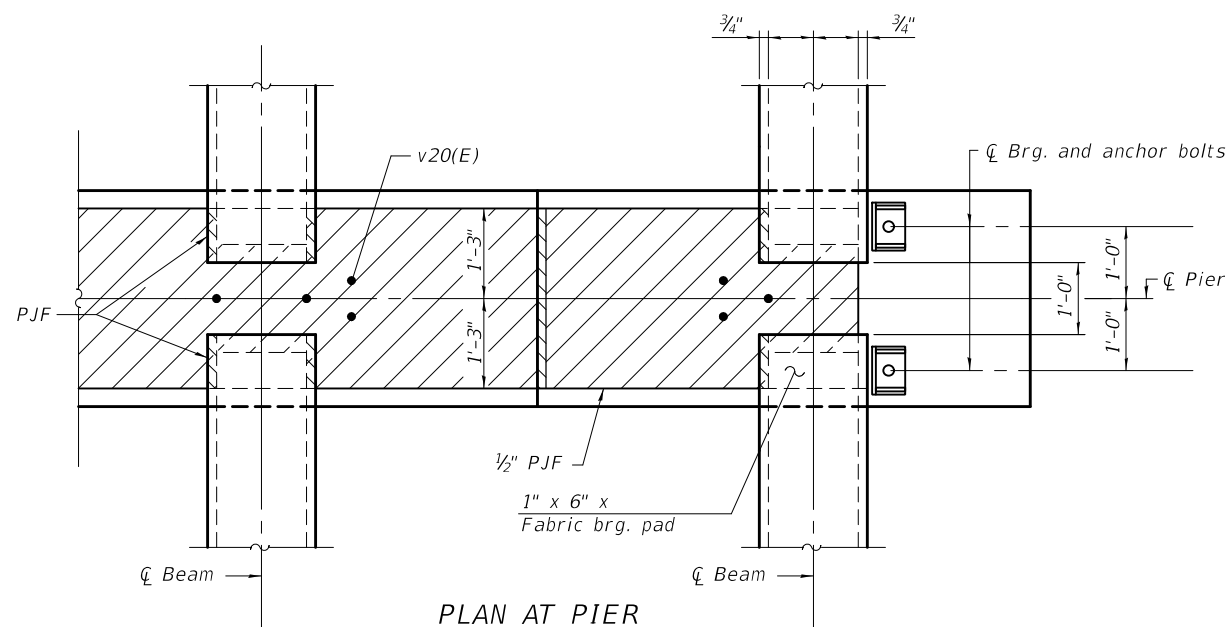
*Bonded to sides of beams embedded into diaphragm.



SECTION A-A

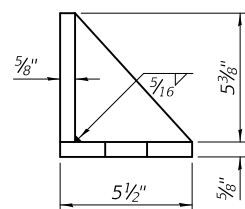


DETAIL 'A'

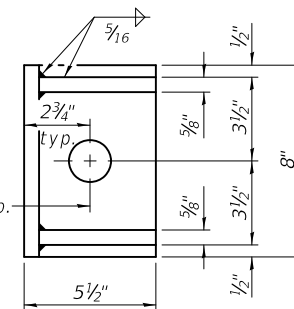


PLAN AT PIER

(Showing bearing pads and P.J.F. details)



1 3/4" Ø hole, typ.



SIDE RETAINER

(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.

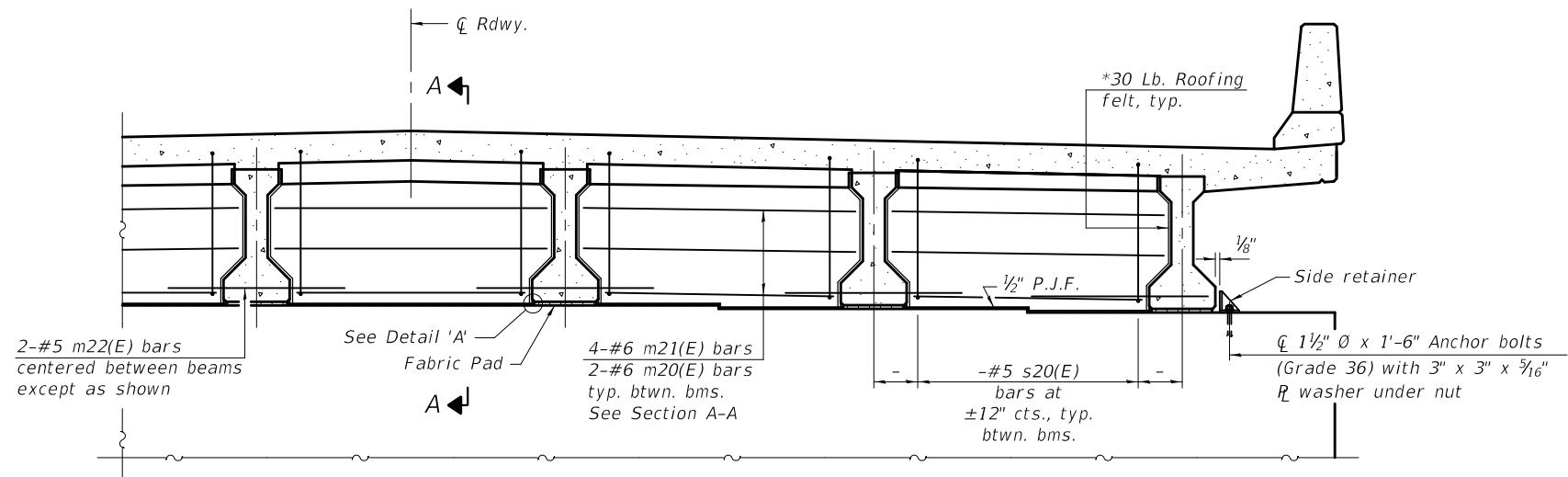
Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet of .
Concrete in diaphragm is included with Concrete Superstructure on sheet of .
Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
Cost of side retainer and anchor bolts shall be included with Concrete Structures.
For details of bar s20(E) see sheet of .
Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

DFP-I3642-0

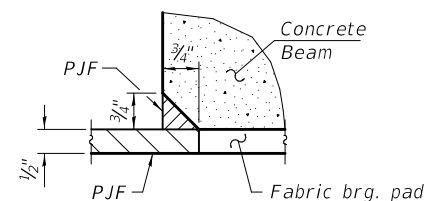
2-17-2017

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							CONTRACT NO.			
						ILLINOIS FED. AID PROJECT				

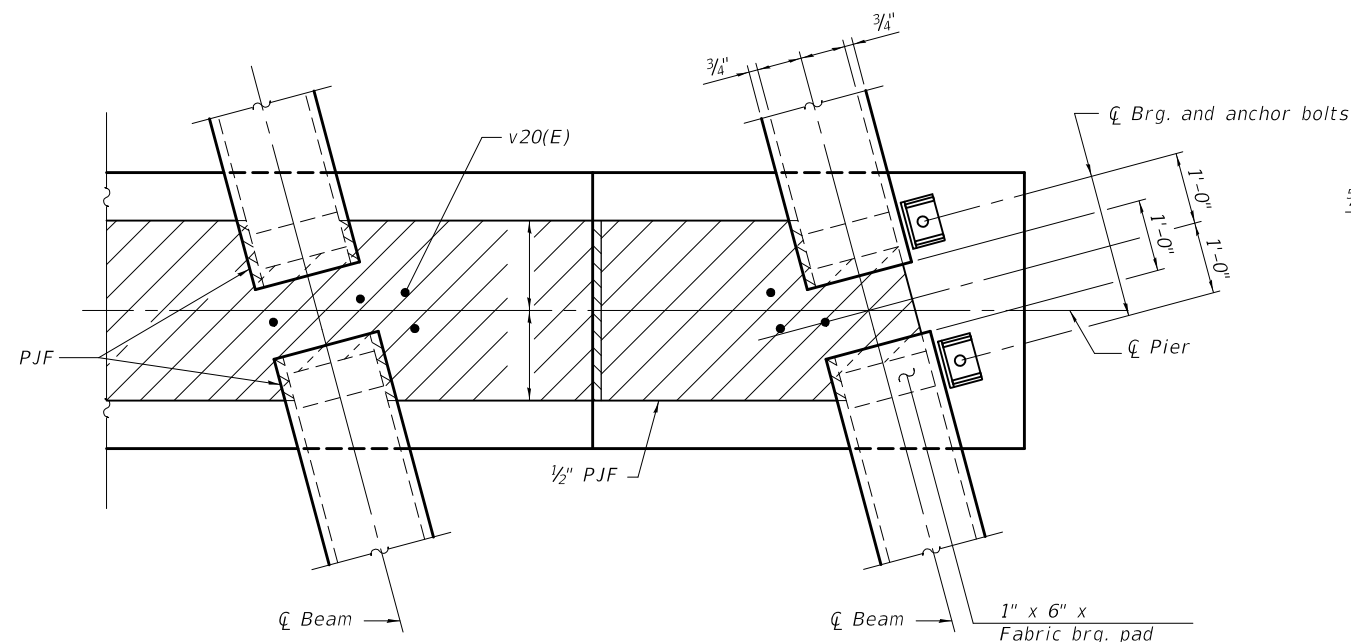


DIAPHRAGM AT PIER

*Bonded to sides of beams embedded into diaphragm.

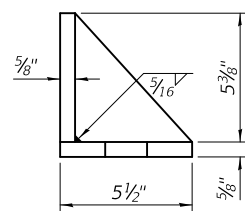


DETAIL 'A'



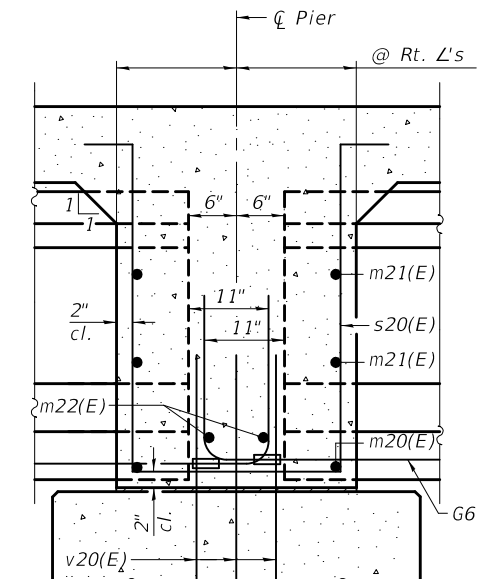
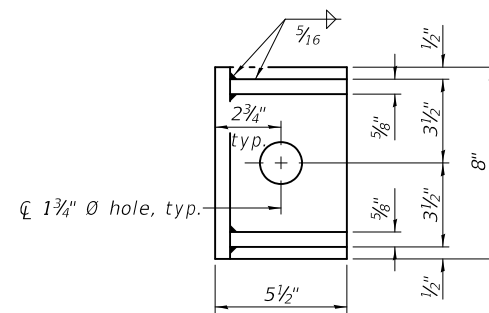
PLAN AT PIER

(Showing bearing pads and P.J.F. details)



SIDE RETAINER

(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.



SECTION A-A

(Dimensions along ϕ of beam except as shown)

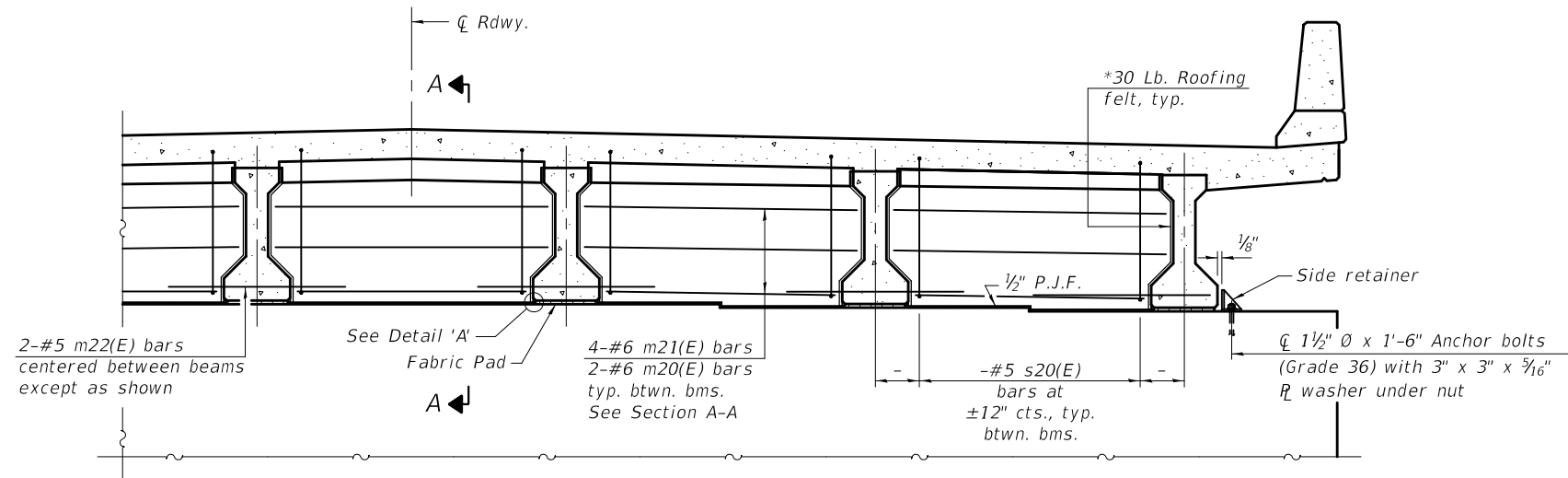
Notes:

- Reinforcement bars in diaphragm are billed with superstructure on sheet of .
- Concrete in diaphragm is included with Concrete Superstructure on sheet of .
- Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
- Cost of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar s20(E) see sheet of .
- The s20(E) bars shall be placed parallel to the beams.
- Spacing for these bars shall be at right angles to the beams.
- Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
- Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

DFP-I3642-L

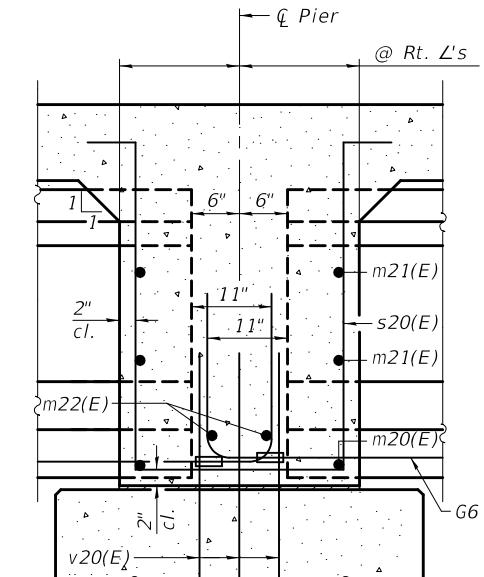
2-17-2017

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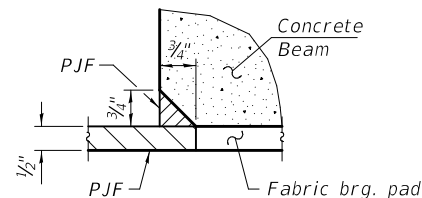
DIAPHRAGM AT PIER

*Bonded to sides of beams embedded into diaphragm.

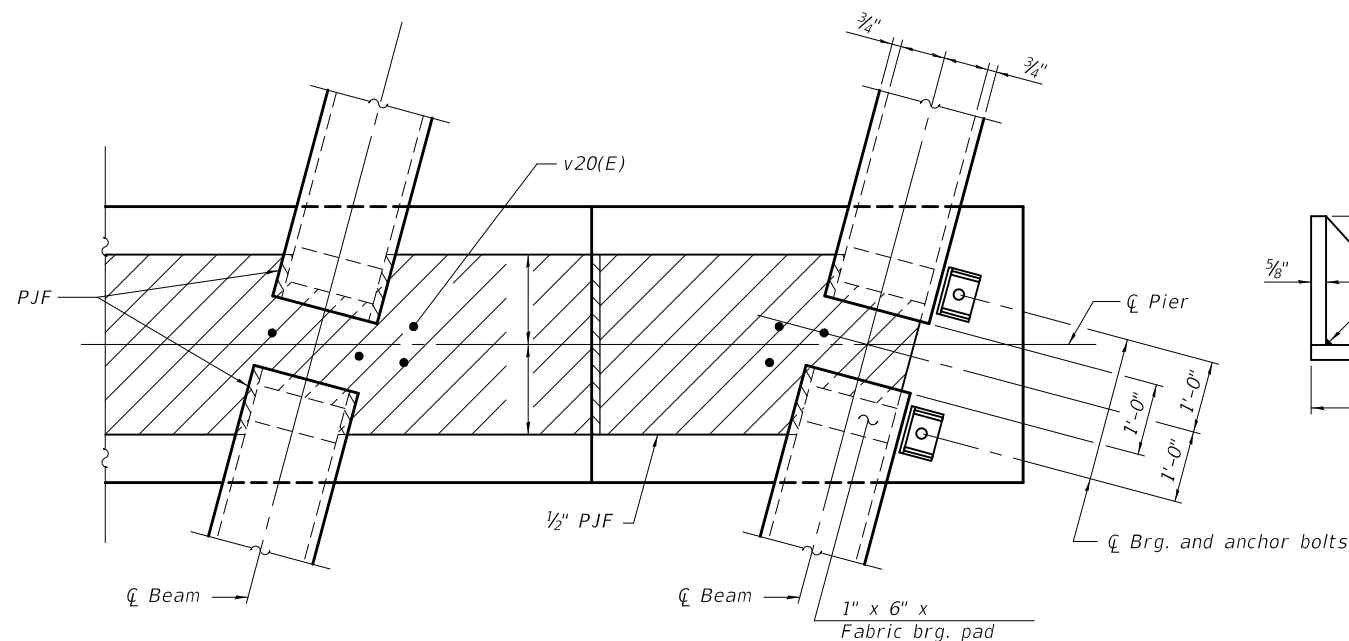


SECTION A-A

(Dimensions along C of beam except as shown)

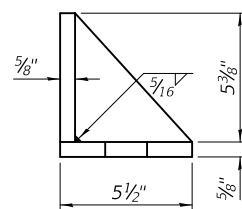


DETAIL 'A'



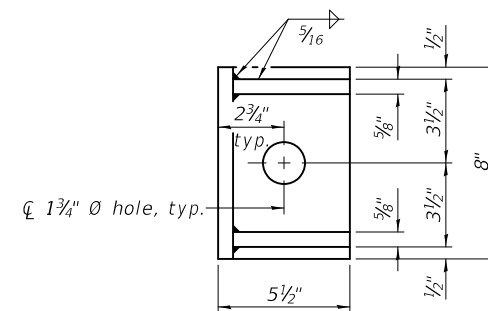
PLAN AT PIER

(Showing bearing pads and P.J.F. details)



SIDE RETAINER

(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.



Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet of .
Concrete in diaphragm is included with Concrete Superstructure on sheet of .

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
Cost of side retainer and anchor bolts shall be included with Concrete Structures.

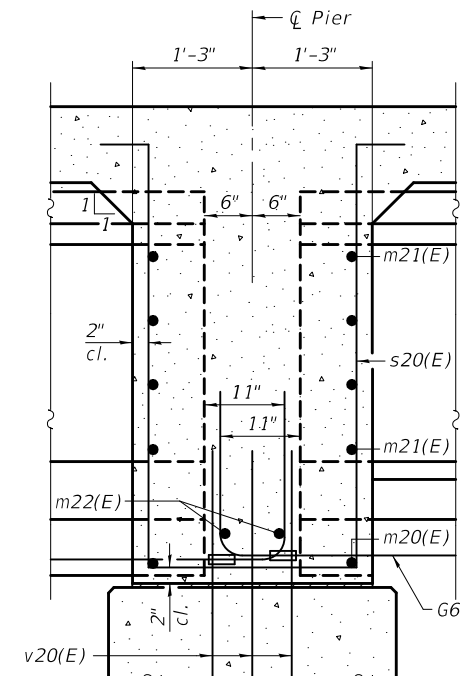
For details of bar s20(E) see sheet of .
The s20(E) bars shall be placed parallel to the beams.
Spacing for these bars shall be at right angles to the beams.
Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

DFP-I3642-R

2-17-2017

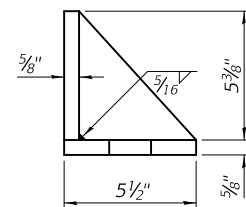
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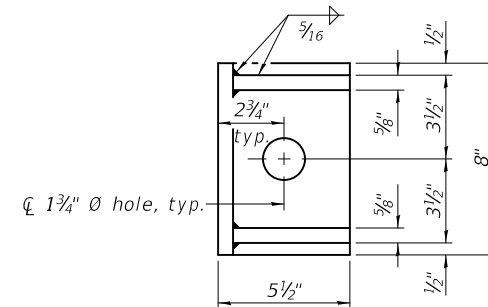
*Bonded to sides of beams embedded into diaphragm.



DETAIL 'A'



(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.

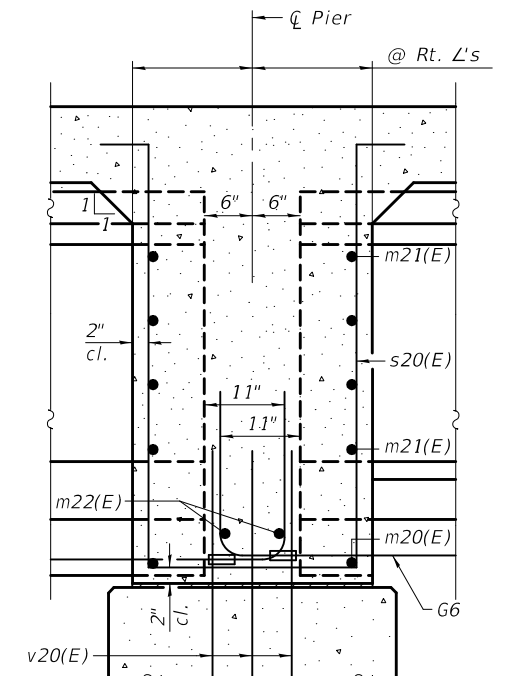


Reinforcement bars in diaphragm are billed with superstructure on sheet of .
Concrete in diaphragm is included with Concrete Superstructure on sheet of .
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PLAN AT PIER
(Showing bearing pads and PJF details)

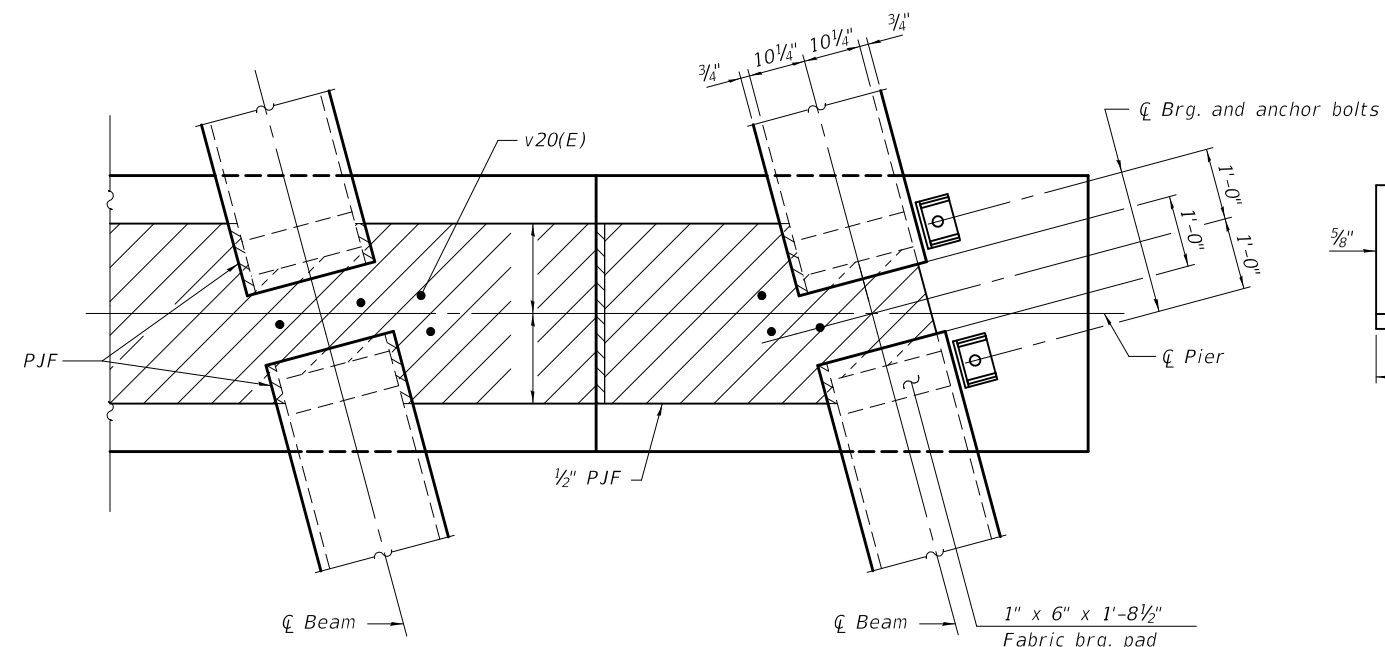
2-17-2017

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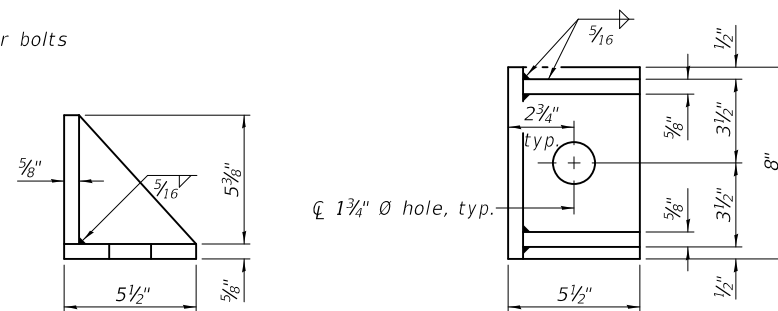


SECTION A-A

(Dimensions along ζ of beam except as shown)

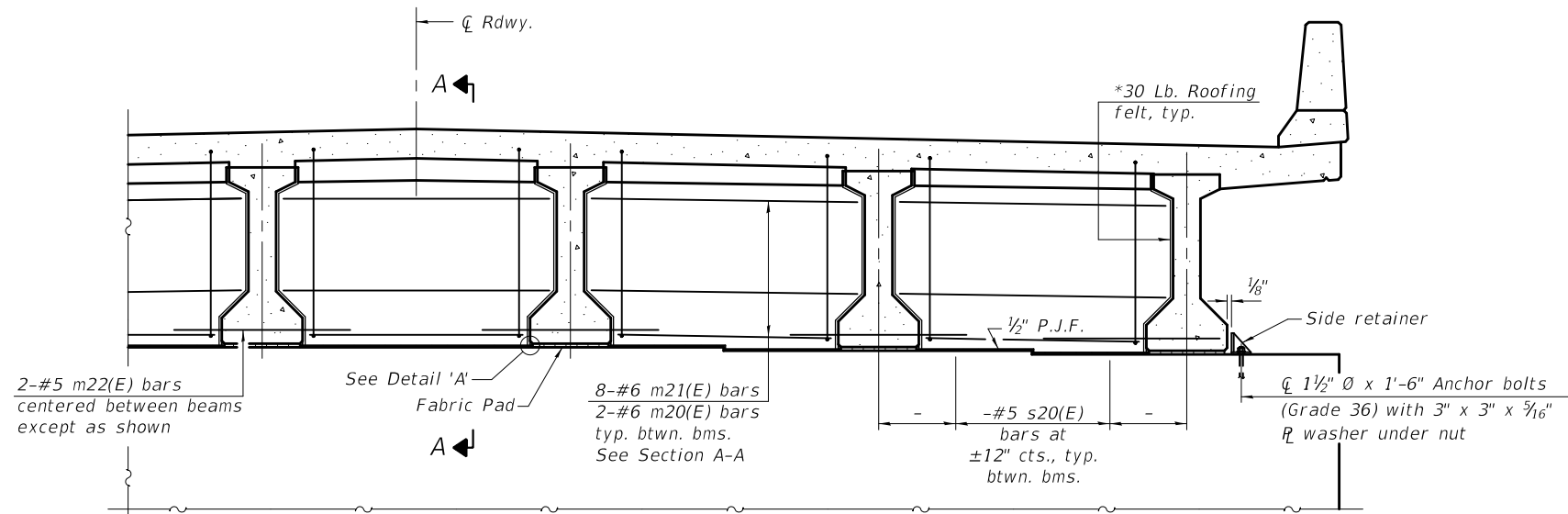


SIDE RETAINER
(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.



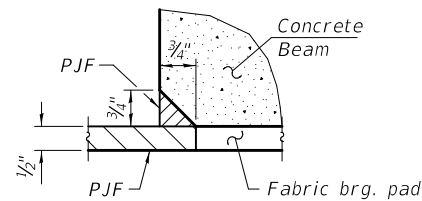
Notes:

- Reinforcement bars in diaphragm are billed with superstructure on sheet of .
- Concrete in diaphragm is included with Concrete Superstructure on sheet of .
- Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
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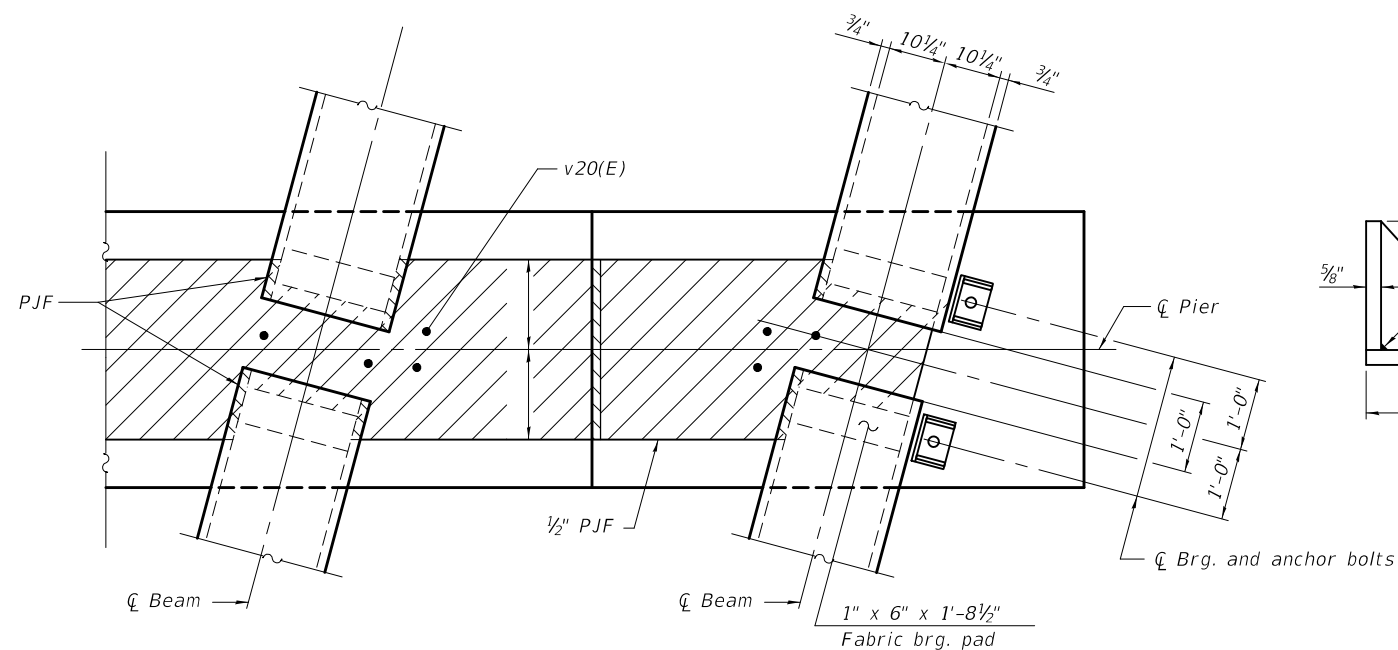


DIAPHRAGM AT PIER

*Bonded to sides of beams embedded into diaphragm.

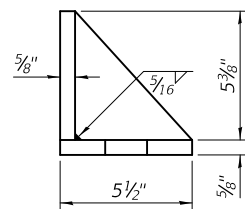


DETAIL 'A'



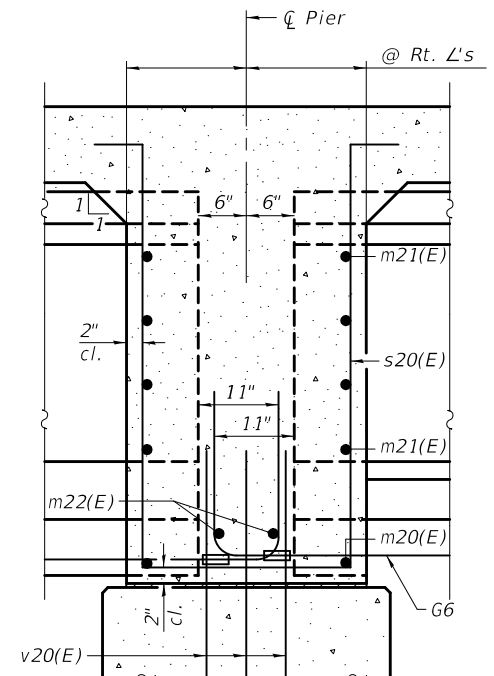
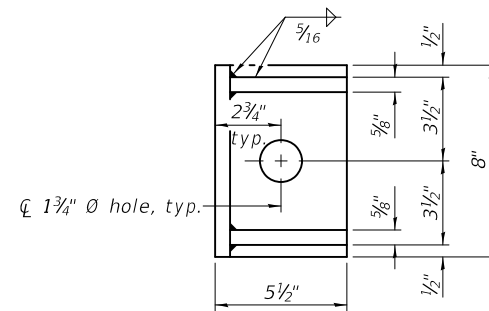
PLAN AT PIER

(Showing bearing pads and P.J.F. details)



SIDE RETAINER

(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.



SECTION A-A

(Dimensions along ϕ of beam except as shown)

Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet of .

Concrete in diaphragm is included with Concrete Superstructure on sheet of .

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Cost of side retainer and anchor bolts shall be included with Concrete Structures.

For details of bar s20(E) see sheet of .

The s20(E) bars shall be placed parallel to the beams.

Spacing for these bars shall be at right angles to the beams.

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.

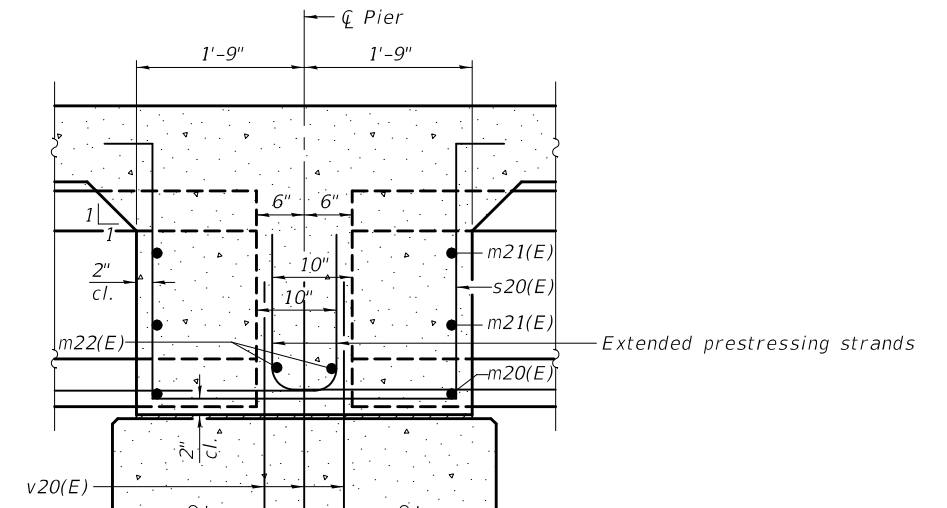
Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

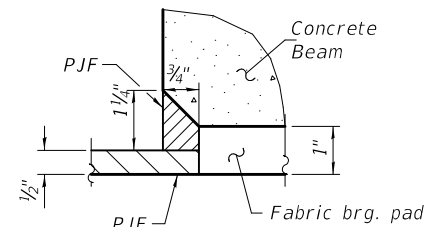
DFP-I4854-R

2-17-2017

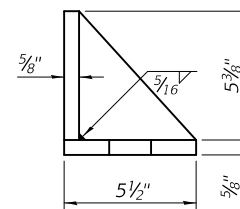
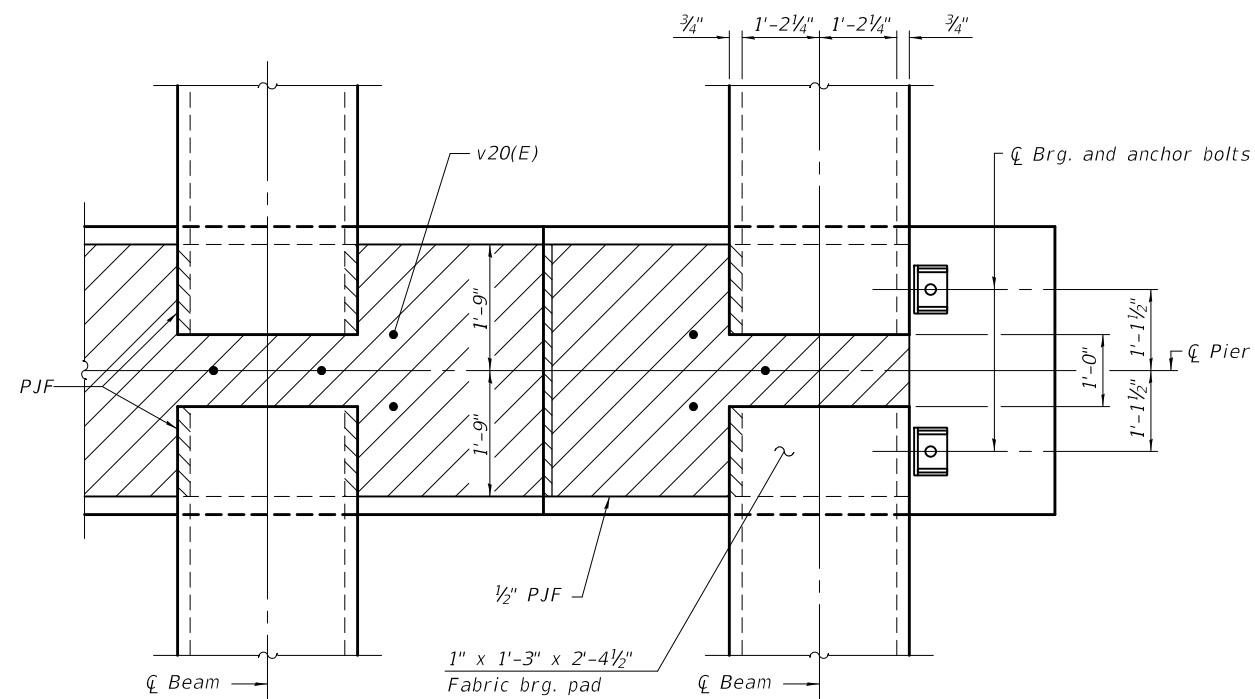
FILE NAME =	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DIAPHRAGM DETAILS STRUCTURE NO.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
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	PLOT DATE =	CHECKED -	REVISED -									
						CONTRACT NO.						
						ILLINOIS FED. AID PROJECT						



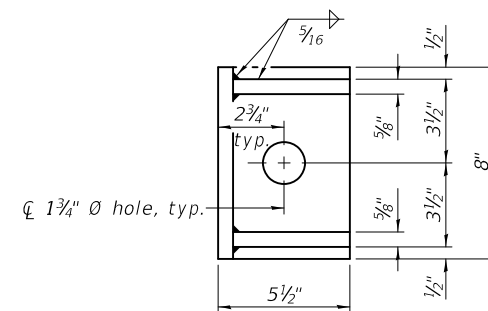
*Bonded to sides of beams embedded into diaphragm.



DETAIL 'A'



SIDE RETAINER
(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.



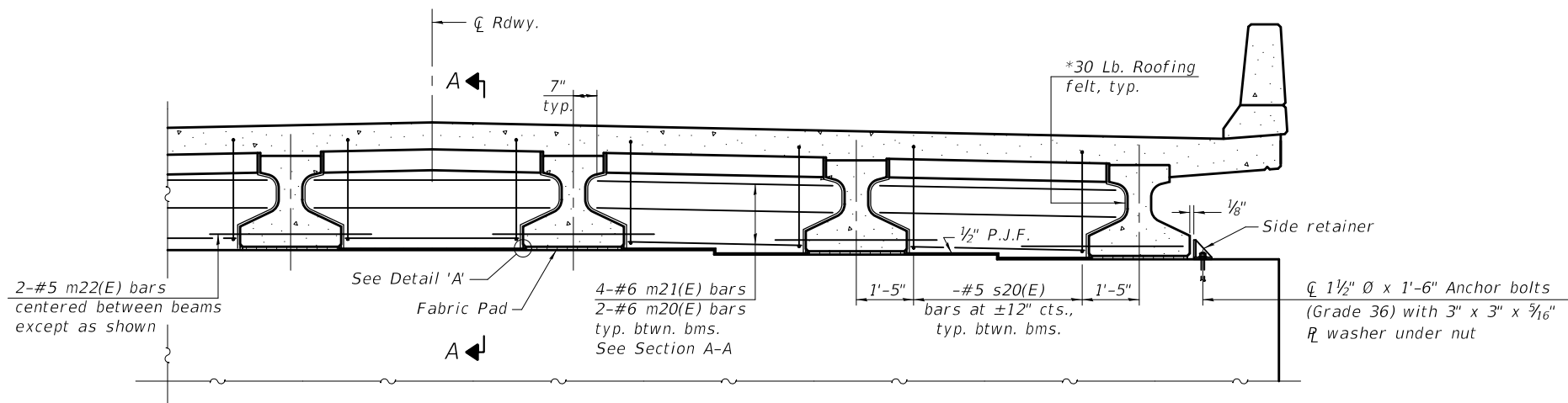
Notes:

- Reinforcement bars in diaphragm are billed with superstructure on sheet of .
- Concrete in diaphragm is included with Concrete Superstructure on sheet of .
- Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
- Cost of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar s20(E) see sheet of .
- Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
- Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

(Showing bearing pads and PJF details)

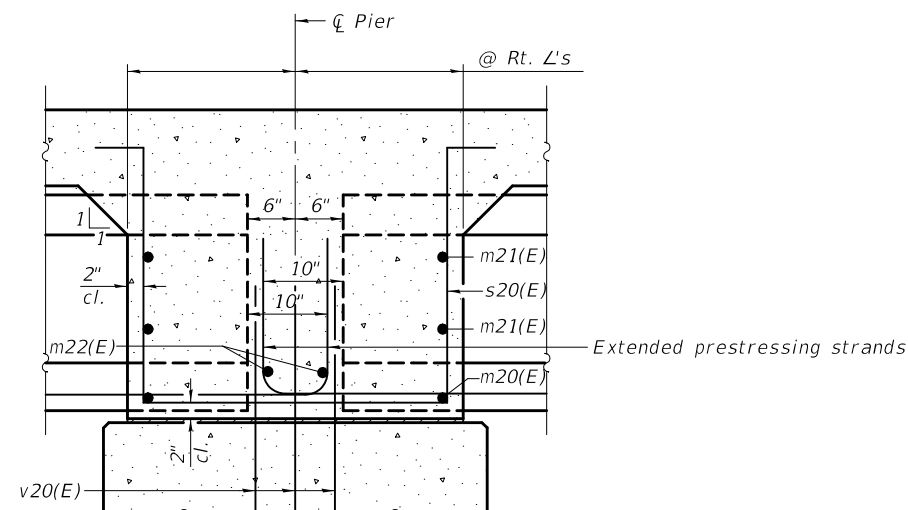
2-17-2017

FILE NAME =	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DIAPHRAGM DETAILS STRUCTURE NO.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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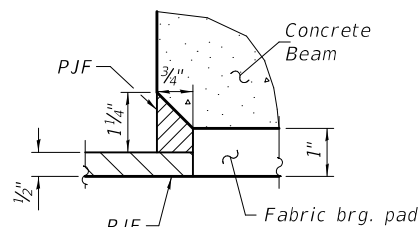
DIAPHRAGM AT PIER

*Bonded to sides of beams embedded into diaphragm.

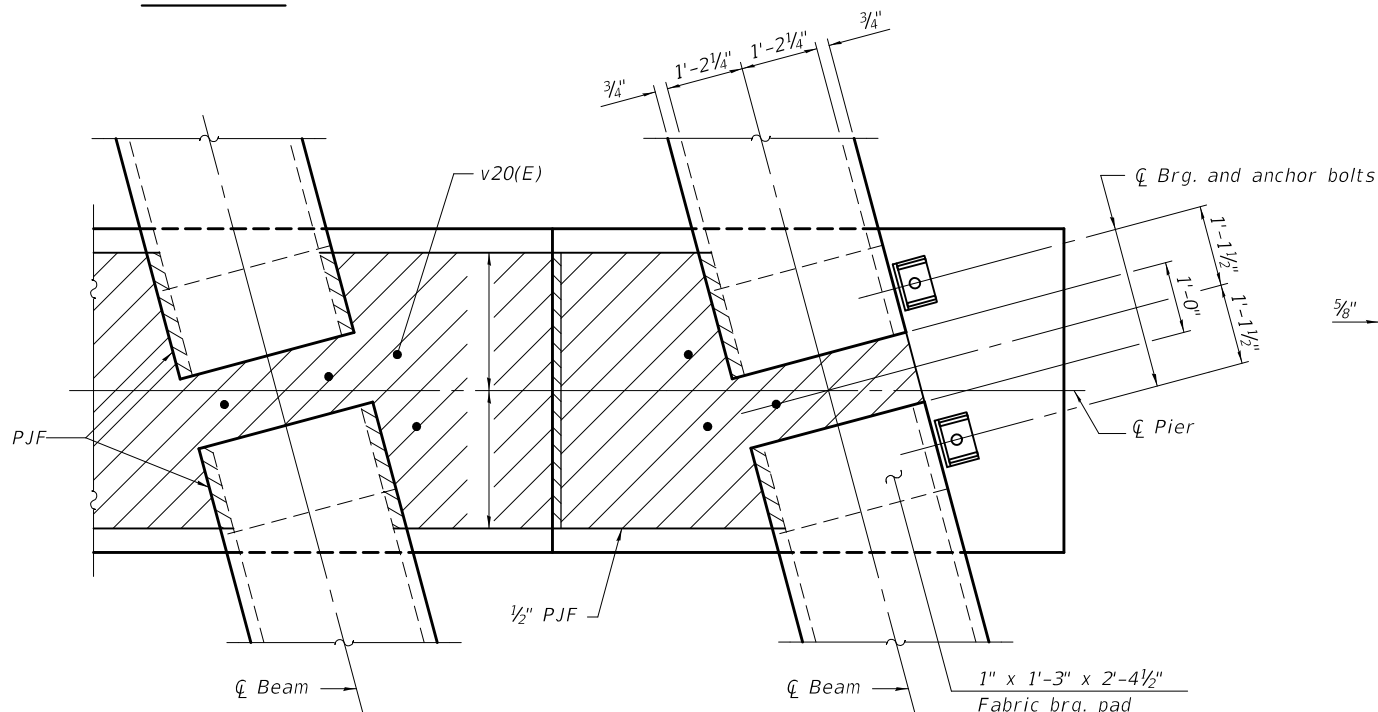


SECTION A-A

(Dimensions along CL of beam except as shown)

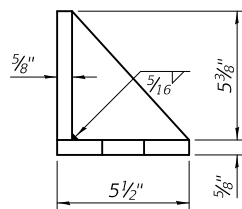


DETAIL 'A'



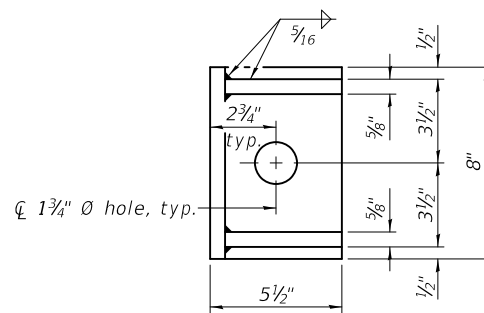
PLAN AT PIER

(Showing bearing pads and P.J.F. details)



SIDE RETAINER

(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.



Notes:

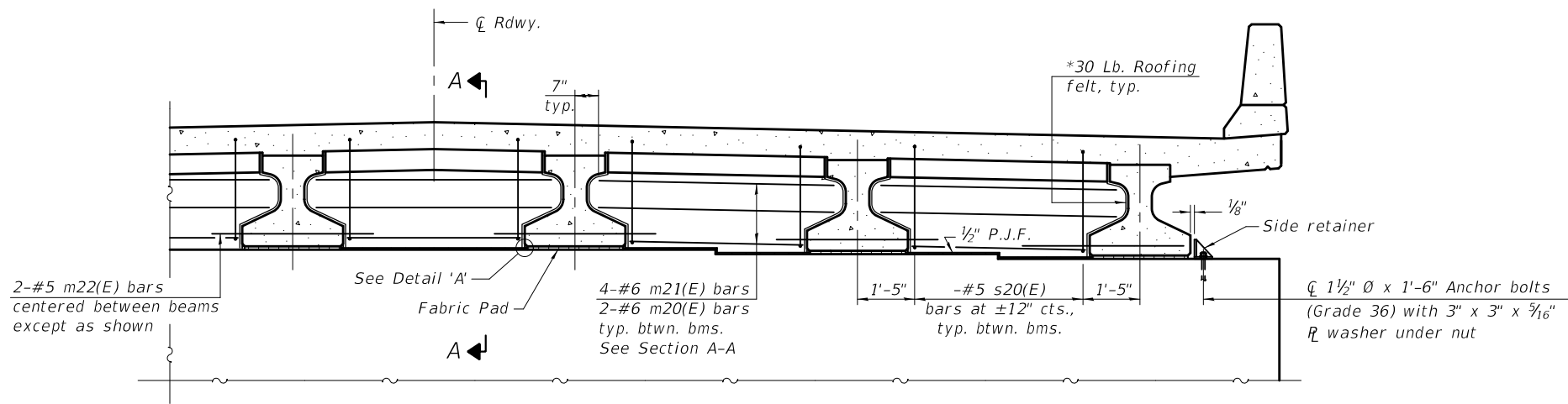
Reinforcement bars in diaphragm are billed with superstructure on sheet of .
Concrete in diaphragm is included with Concrete Superstructure on sheet of .
Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
Cost of side retainer and anchor bolts shall be included with Concrete Structures.

For details of bar s20(E) see sheet of .
The s20(E) bars shall be placed parallel to the beams.
Spacing for these bars shall be at right angles to the beams.
Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

DFP-IL27-L

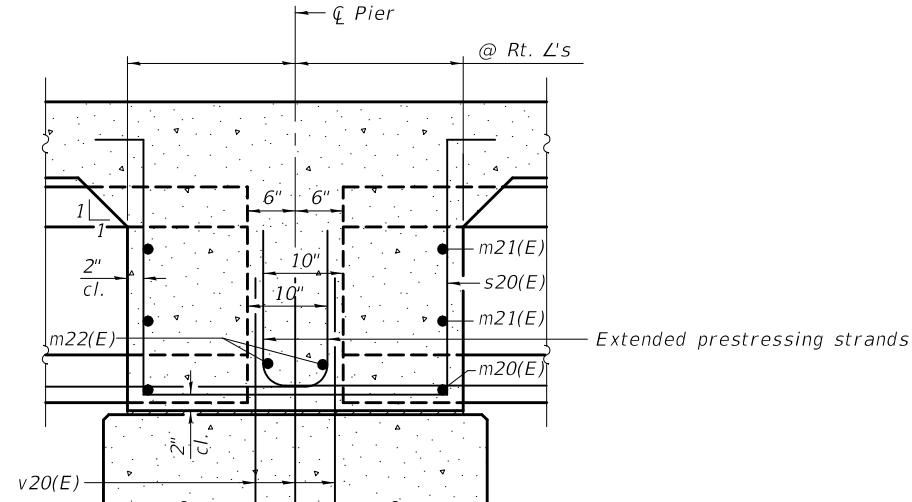
2-17-2017

FILE NAME =	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DIAPHRAGM DETAILS STRUCTURE NO.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	PLOT DATE =	CHECKED -	REVISED -							
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						ILLINOIS FED. AID PROJECT				



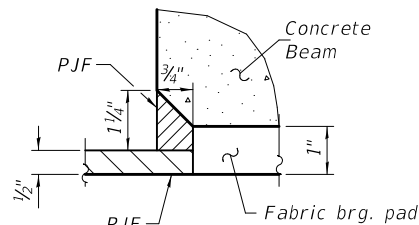
DIAPHRAGM AT PIER

*Bonded to sides of beams embedded into diaphragm.

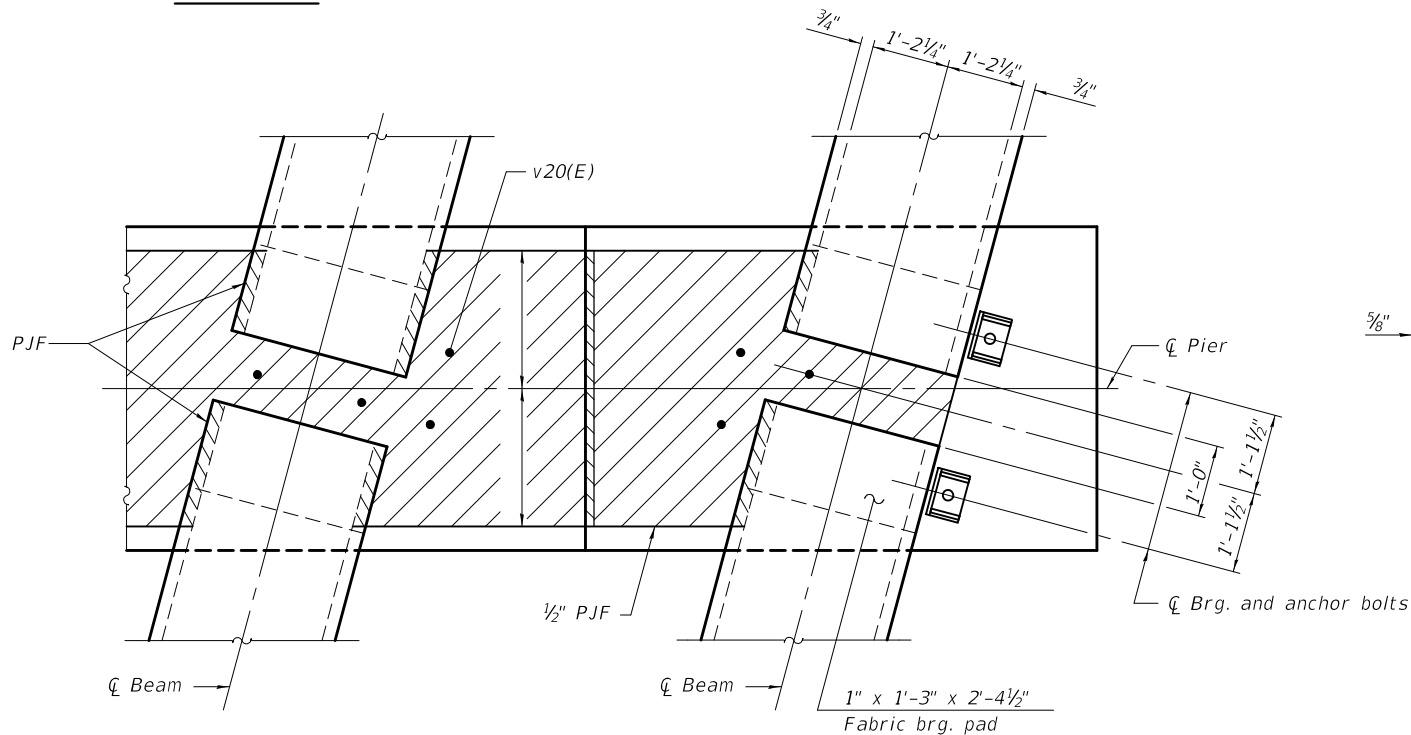


SECTION A-A

(Dimensions along \bar{C} of beam except as shown)

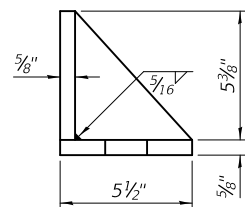


DETAIL 'A'



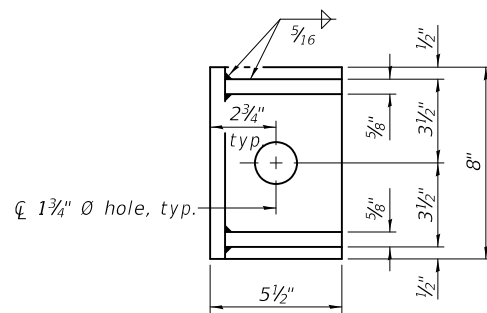
PLAN AT PIER

(Showing bearing pads and P.J.F. details)



SIDE RETAINER

(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.



Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet of .

Concrete in diaphragm is included with Concrete Superstructure on sheet of .

Cost of 30 Lb. roofing felt is included with Concrete Superstructure. Cost of side retainer and anchor bolts shall be included with Concrete Structures.

For details of bar s20(E) see sheet of .

The s20(E) bars shall be placed parallel to the beams.

Spacing for these bars shall be at right angles to the beams.

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.

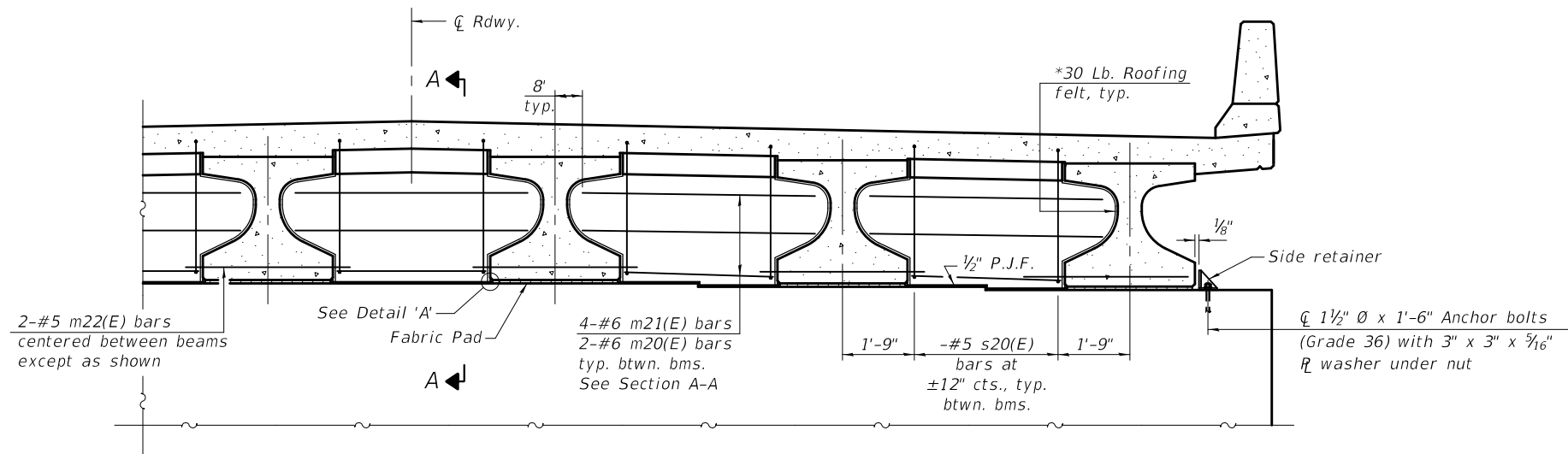
Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

DFP-IL27-R

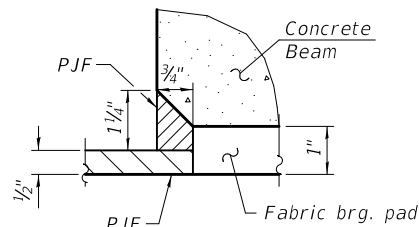
2-17-2017

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							CONTRACT NO.			
						ILLINOIS FED. AID PROJECT				

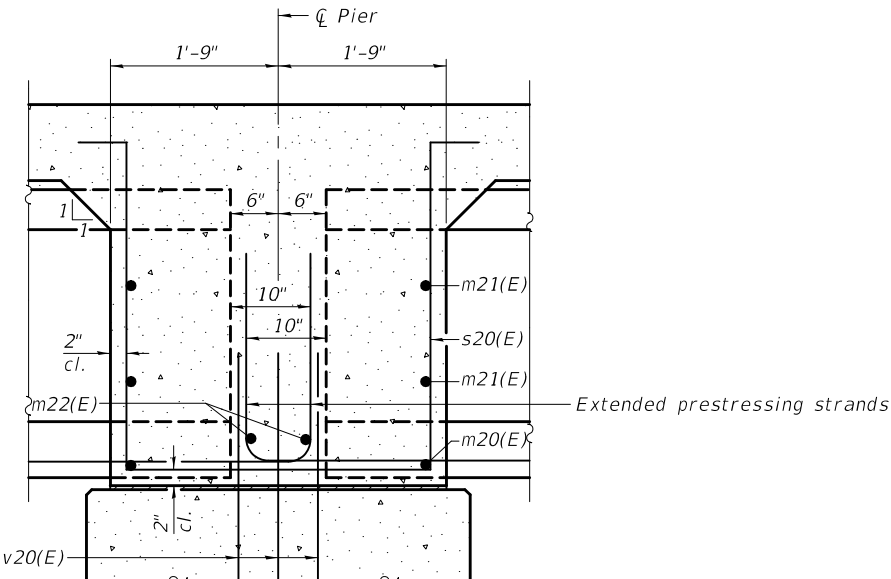


DIAPHRAGM AT PIER

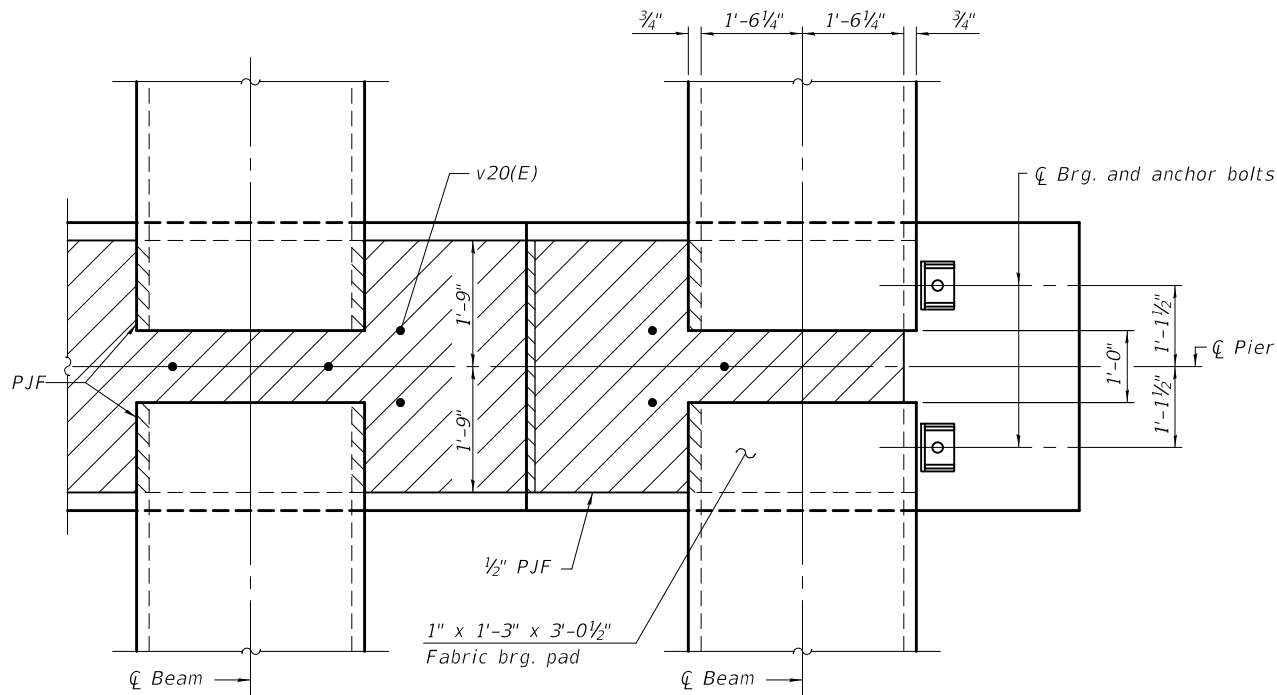
*Bonded to sides of beams embedded into diaphragm.



DETAIL 'A'

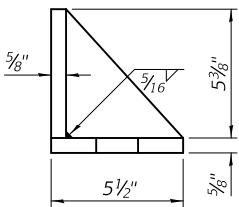


SECTION A-A



PLAN AT PIER

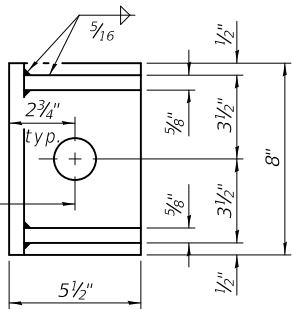
(Showing bearing pads and P.J.F. details)



1 3/4 inch diameter hole, typical.

SIDE RETAINER

(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.

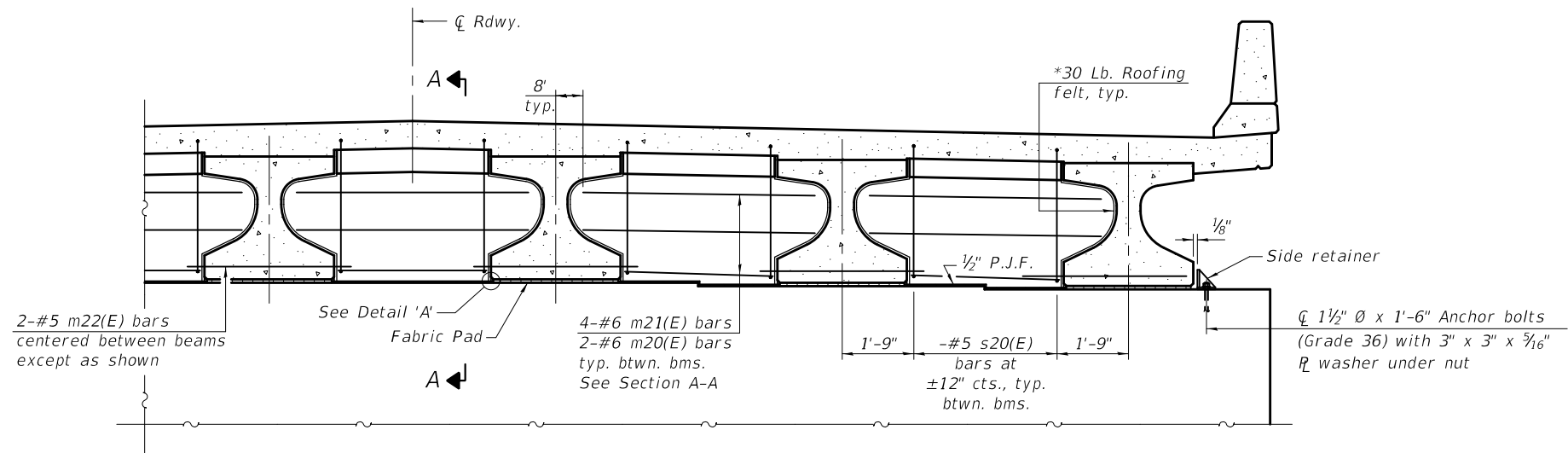


Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheet of .
Concrete in diaphragm is included with Concrete Superstructure on sheet of .
Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
Cost of side retainer and anchor bolts shall be included with Concrete Structures.
For details of bar s20(E) see sheet of .
Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

DFP-IL36-0

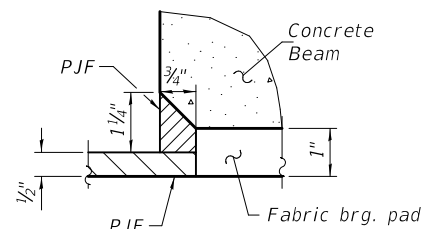
2-17-2017

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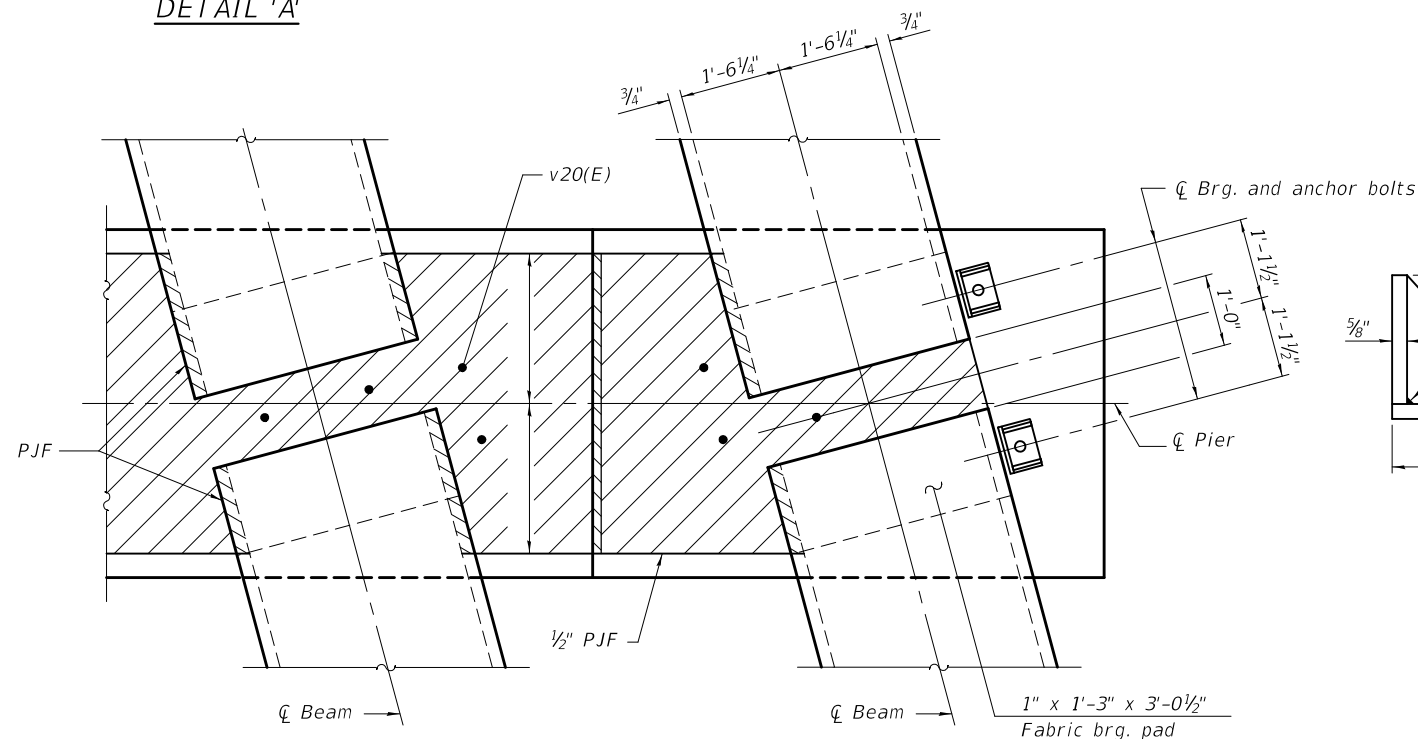


DIAPHRAGM AT PIER

*Bonded to sides of beams embedded into diaphragm.

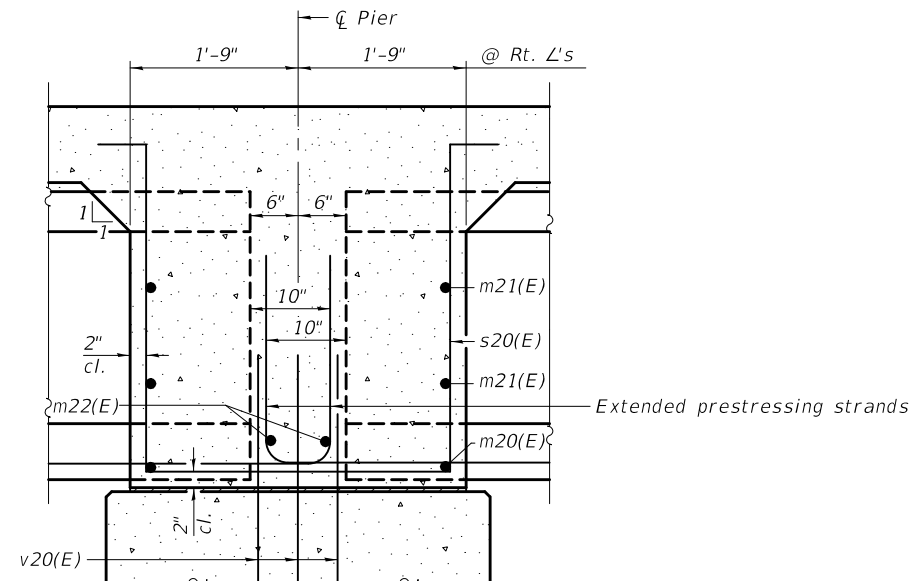


DETAIL 'A'



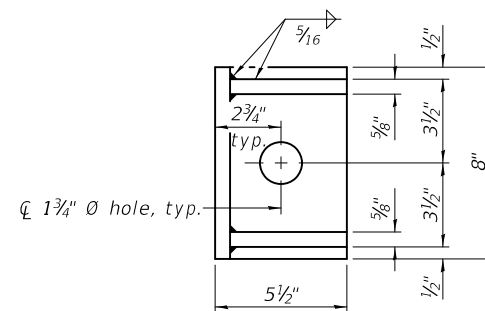
PLAN AT PIER

(Showing bearing pads and P.J.F. details)



SECTION A-A

(Dimensions along C of beam except as shown)



SIDE RETAINER

(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.

Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet of .

Concrete in diaphragm is included with Concrete Superstructure on sheet of .

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Cost of side retainer and anchor bolts shall be included with Concrete Structures.

For details of bar s20(E) see sheet of .

The s20(E) bars shall be placed parallel to the beams.

Spacing for these bars shall be at right angles to the beams.

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.

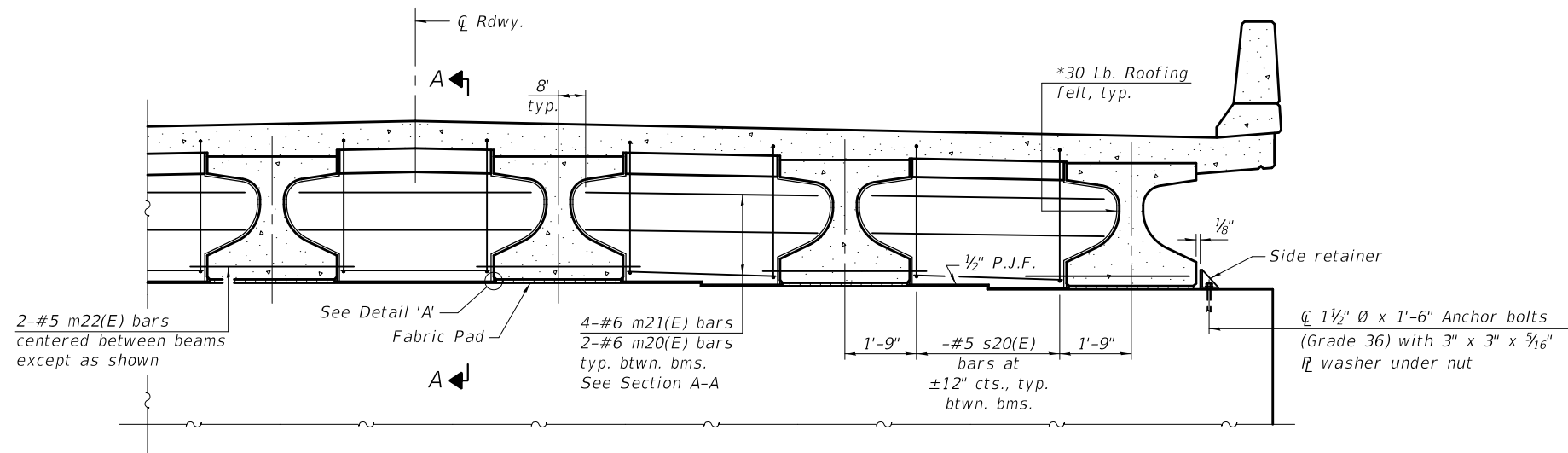
Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

DFP-IL36-L

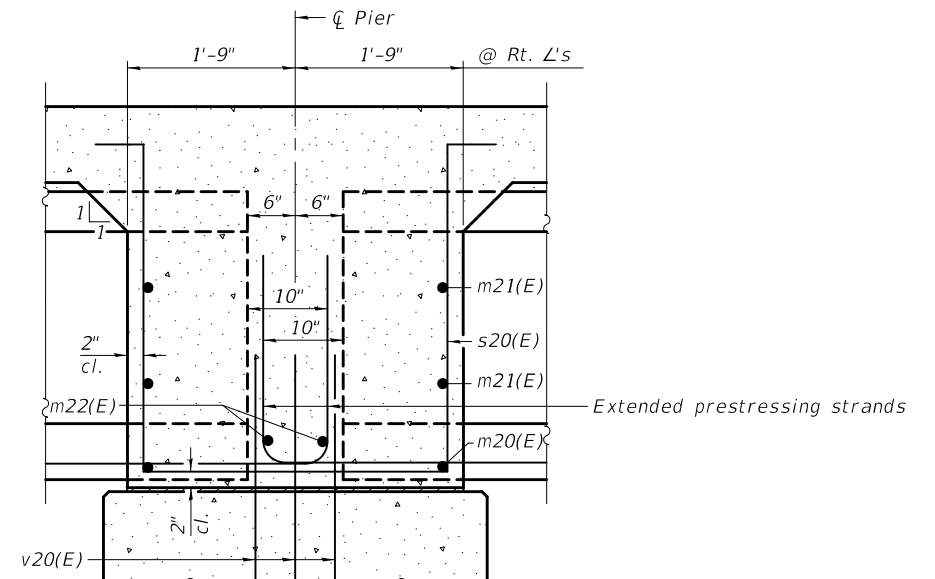
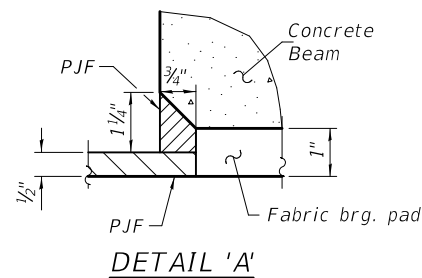
2-17-2017

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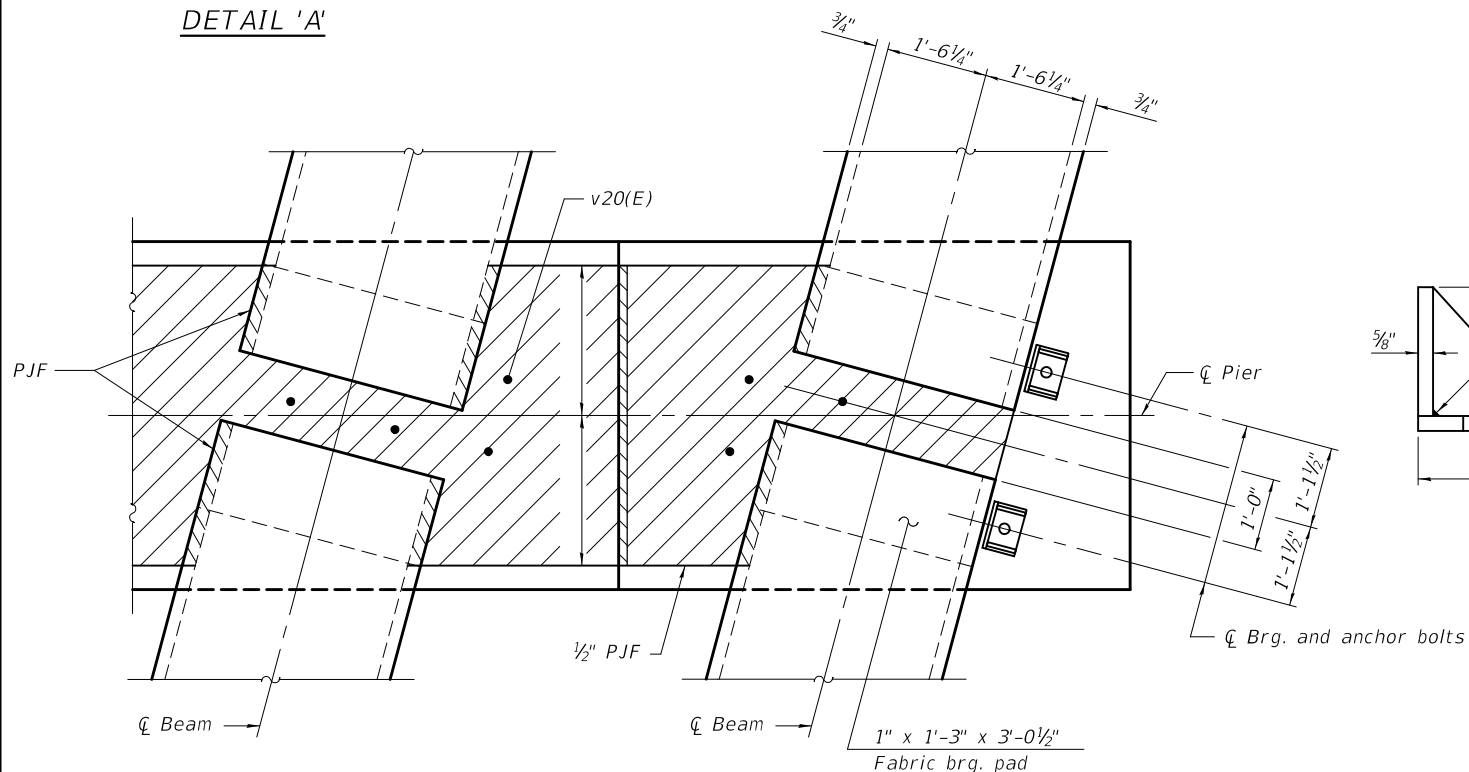
DIAPHRAGM AT PIER

*Bonded to sides of beams embedded into diaphragm.



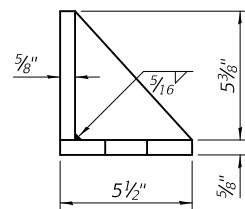
SECTION A-A

(Dimensions along \bar{C} of beam except as shown)



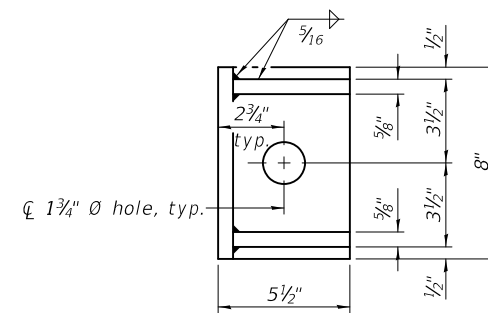
PLAN AT PIER

(Showing bearing pads and P.J.F. details)



SIDE RETAINER

(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.



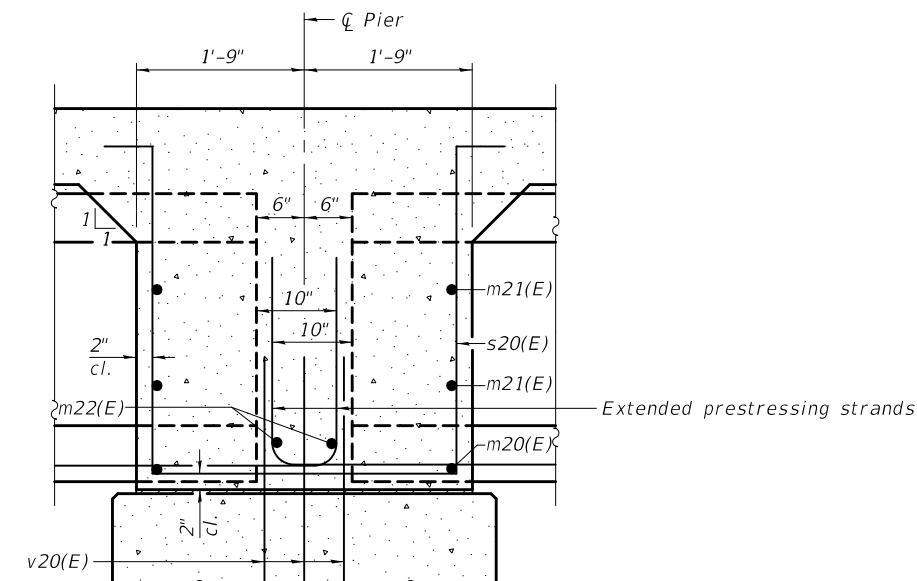
Notes:

- Reinforcement bars in diaphragm are billed with superstructure on sheet of .
- Concrete in diaphragm is included with Concrete Superstructure on sheet of .
- Cost of 30 lb. roofing felt is included with Concrete Superstructure.
- Cost of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar s20(E) see sheet of .
- The s20(E) bars shall be placed parallel to the beams.
- Spacing for these bars shall be at right angles to the beams.
- Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
- Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

DFP-IL36-R

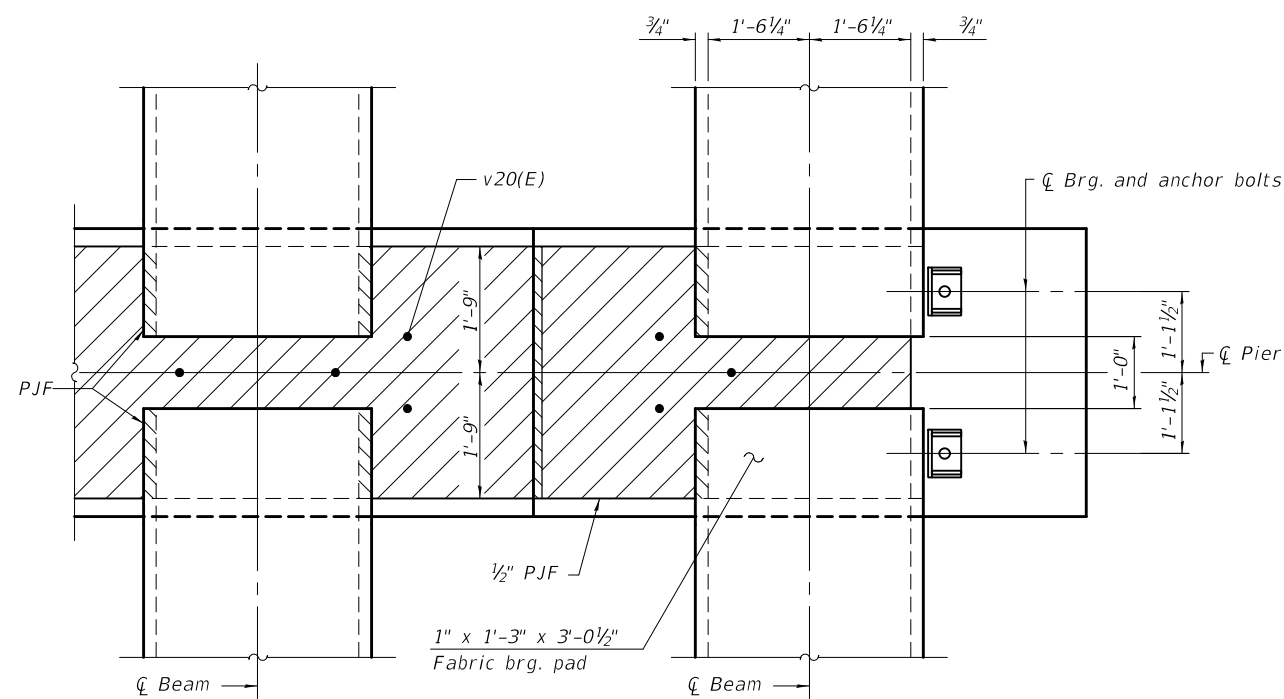
2-17-2017

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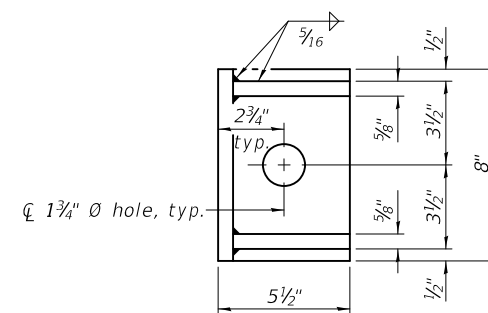
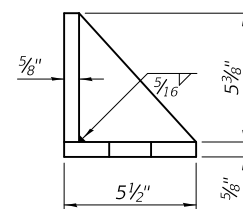


SECTION A-A

—Extended prestressing strands



SIDE RETAINER
(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.



Reinforcement bars in diaphragm are billed with superstructure on sheet of .

Concrete in diaphragm is included with Concrete Superstructure on sheet of .

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Cost of side retainer and anchor bolts shall be included with Concrete Structures.

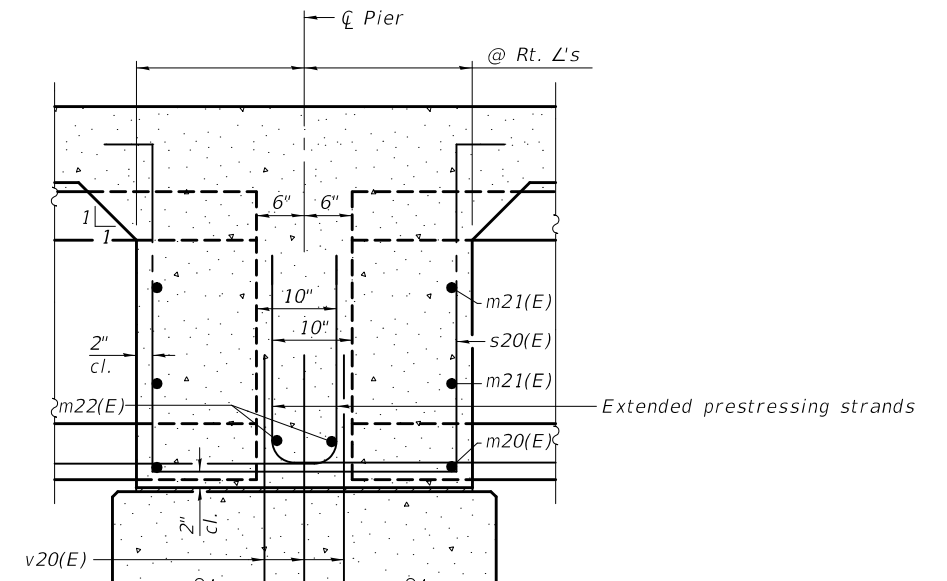
For details of bar s20(E) see sheet of .

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.

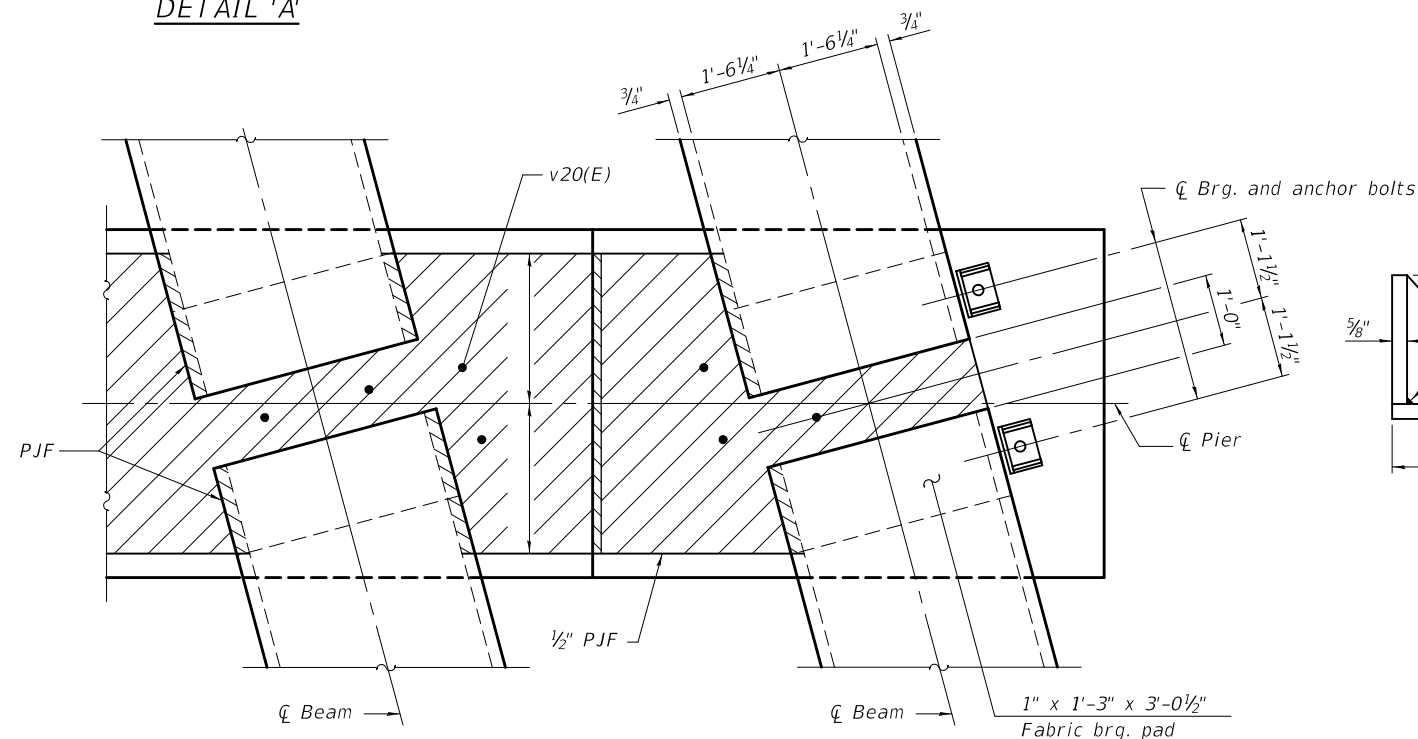
Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

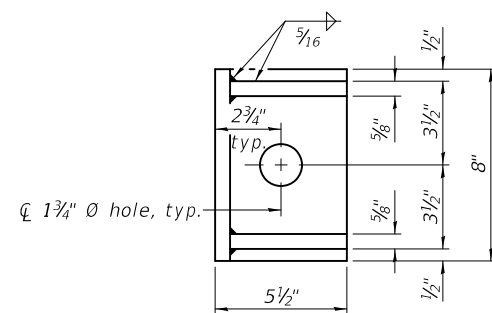
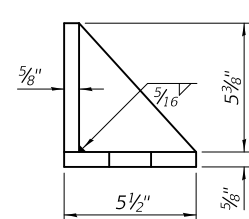
(Showing bearing pads and PJF details)



SECTION A-A
(Dimensions along C of beam except as shown)



SIDE RETAINER
(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.



Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet of .

Concrete in diaphragm is included with Concrete Superstructure on sheet of .

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Cost of side retainer and anchor bolts shall be included with Concrete Structures.

For details of bar s20(E) see sheet of .

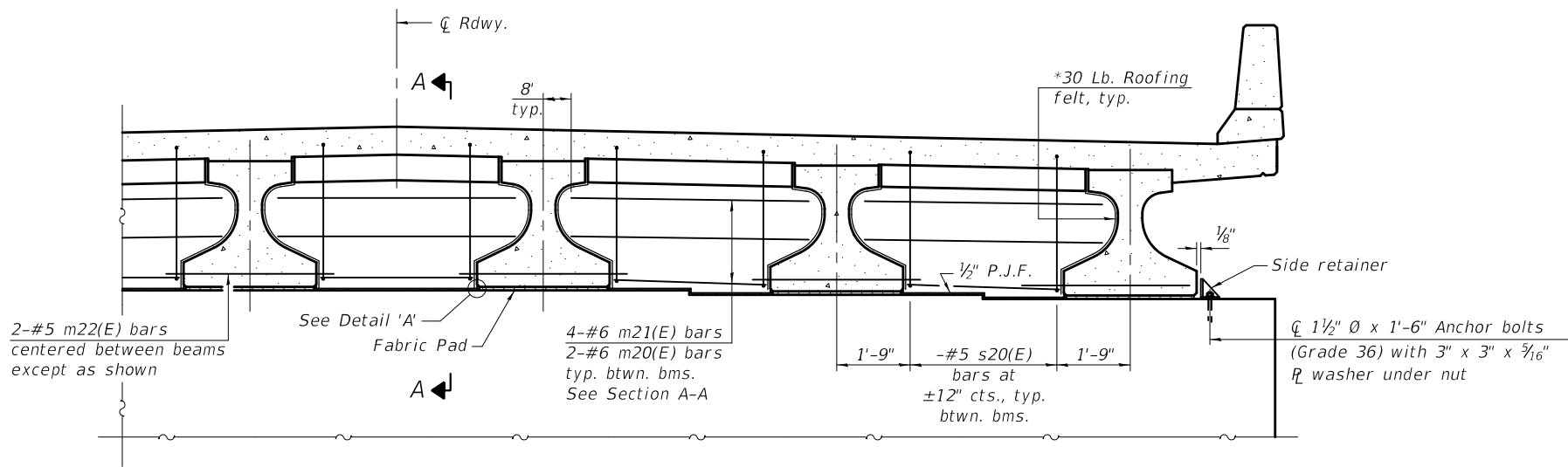
The s20(E) bars shall be placed parallel to the beams.

Spacing for these bars shall be at right angles to the beams.

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.

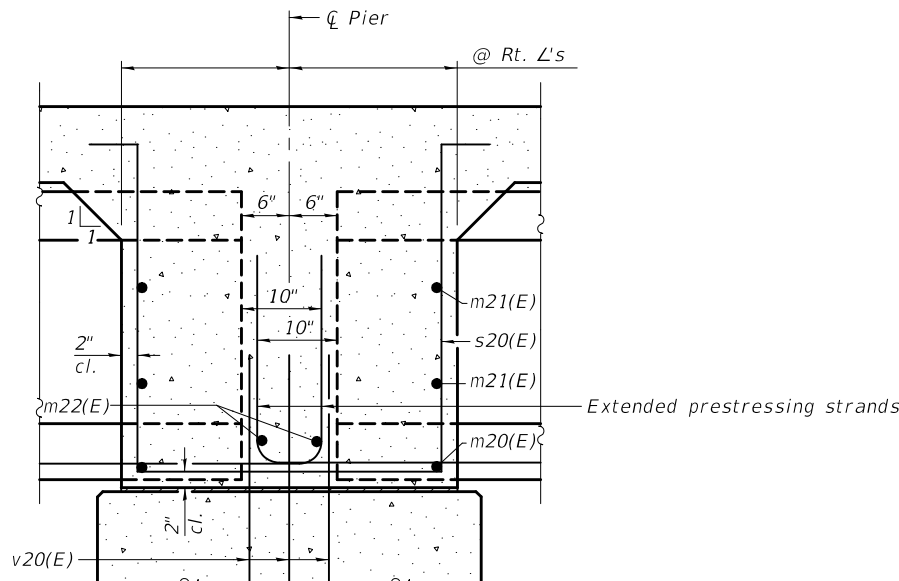
Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.



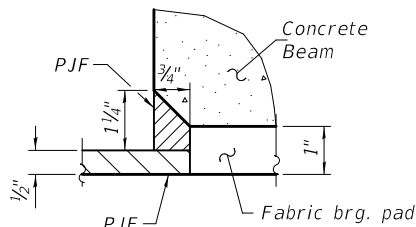
DIAPHRAGM AT PIER

*Bonded to sides of beams embedded into diaphragm.

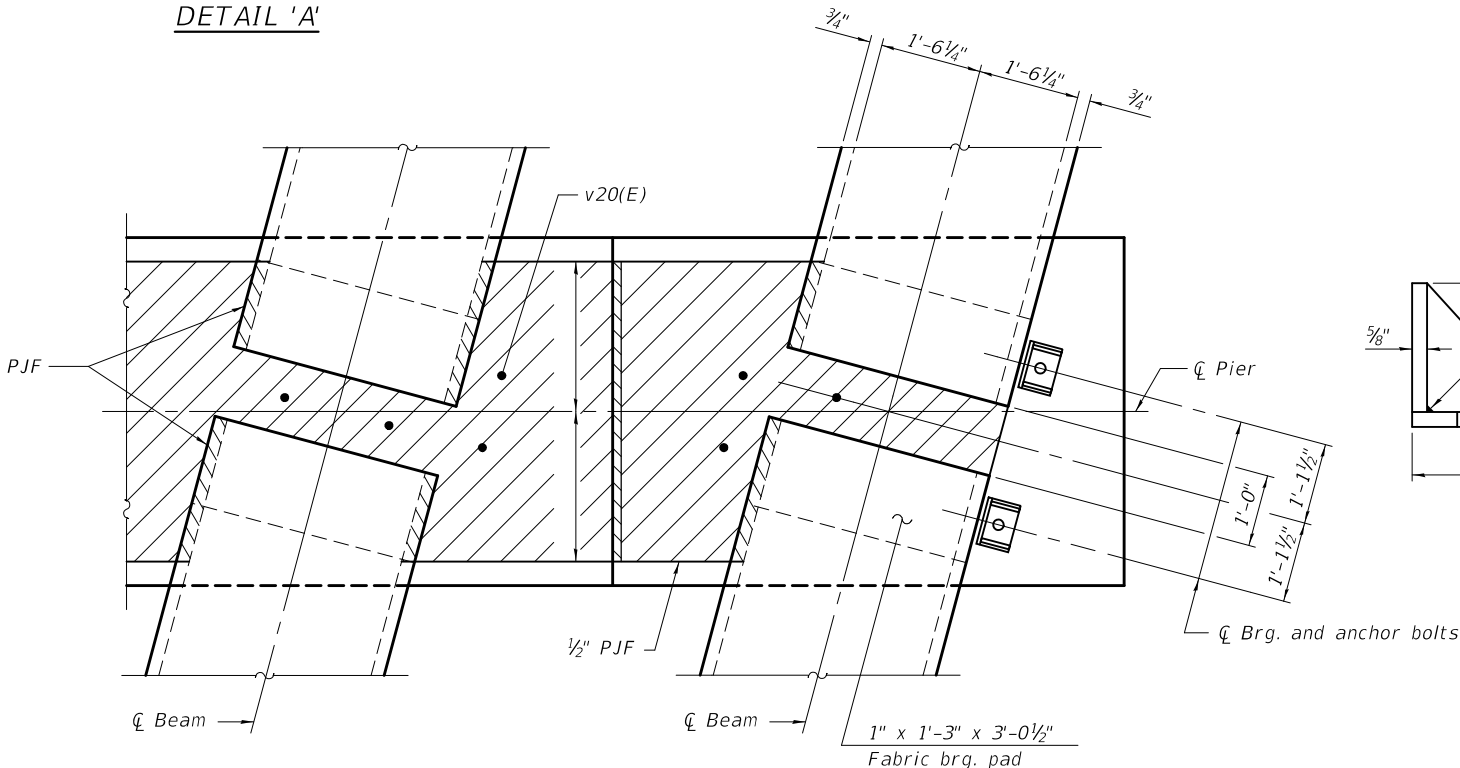


SECTION A-A

(Dimensions along Cl. of beam except as shown)

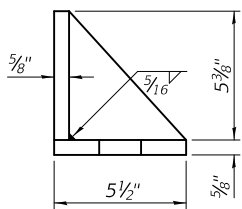


DETAIL 'A'



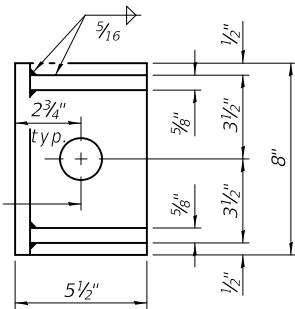
PLAN AT PIER

(Showing bearing pads and P.J.F. details)



SIDE RETAINER

(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.



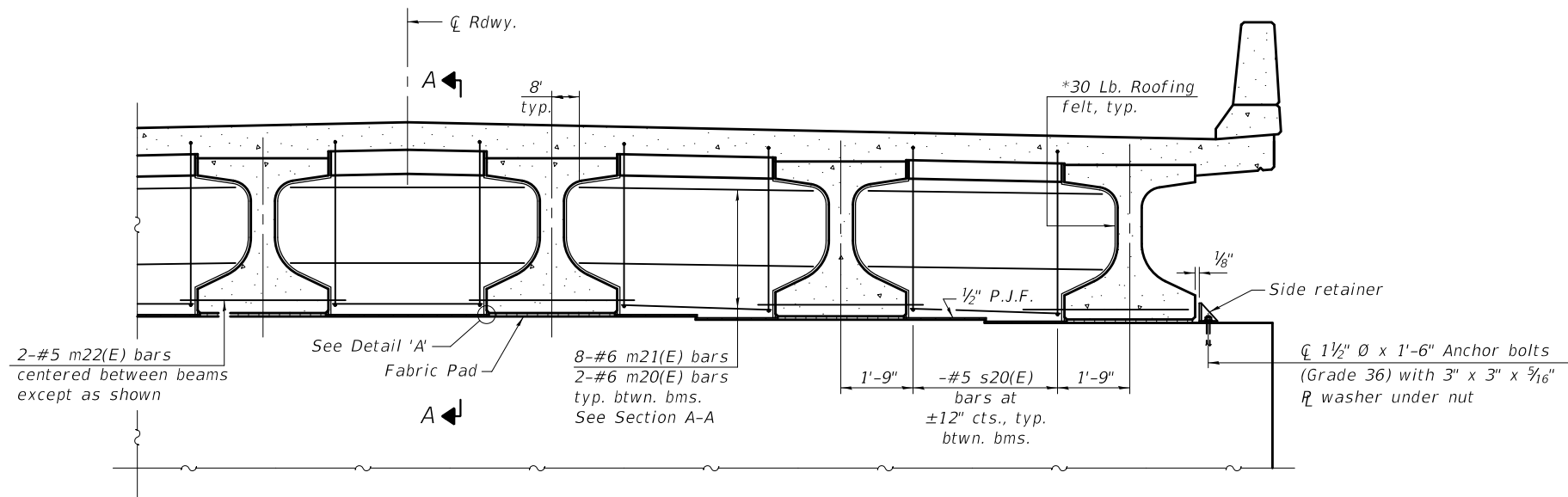
Notes:

- Reinforcement bars in diaphragm are billed with superstructure on sheet of .
- Concrete in diaphragm is included with Concrete Superstructure on sheet of .
- Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
- Cost of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar s20(E) see sheet of .
- The s20(E) bars shall be placed parallel to the beams.
- Spacing for these bars shall be at right angles to the beams.
- Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
- Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

DFP-IL36N-R

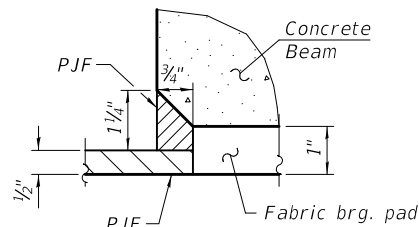
2-17-2017

FILE NAME =	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DIAPHRAGM DETAILS STRUCTURE NO.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.			
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	PLOT SCALE =	DRAWN -	REVISED -										
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							ILLINOIS FED. AID PROJECT						

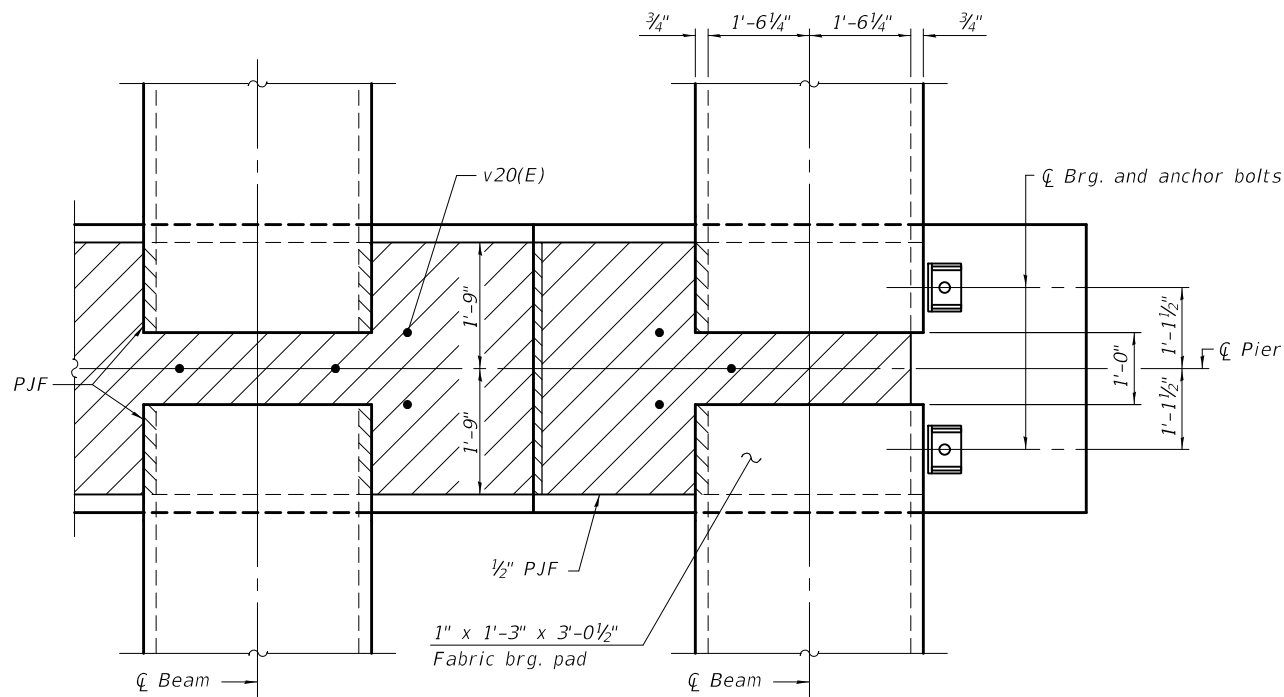


DIAPHRAGM AT PIER

*Bonded to sides of beams embedded into diaphragm.

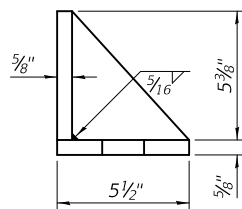


DETAIL 'A'



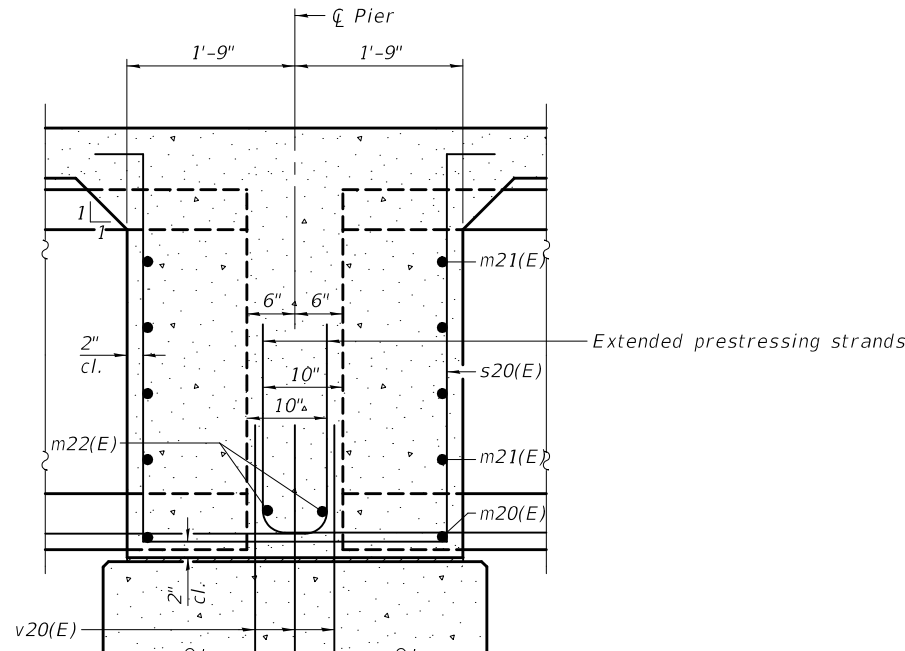
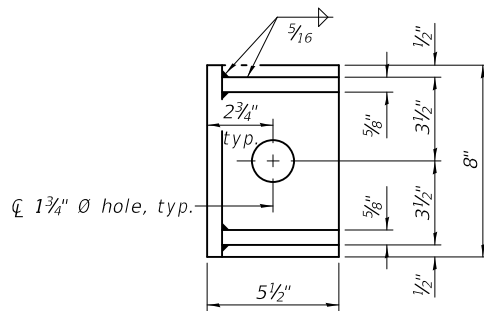
PLAN AT PIER

(Showing bearing pads and P.J.F. details)



SIDE RETAINER

(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.



SECTION A-A

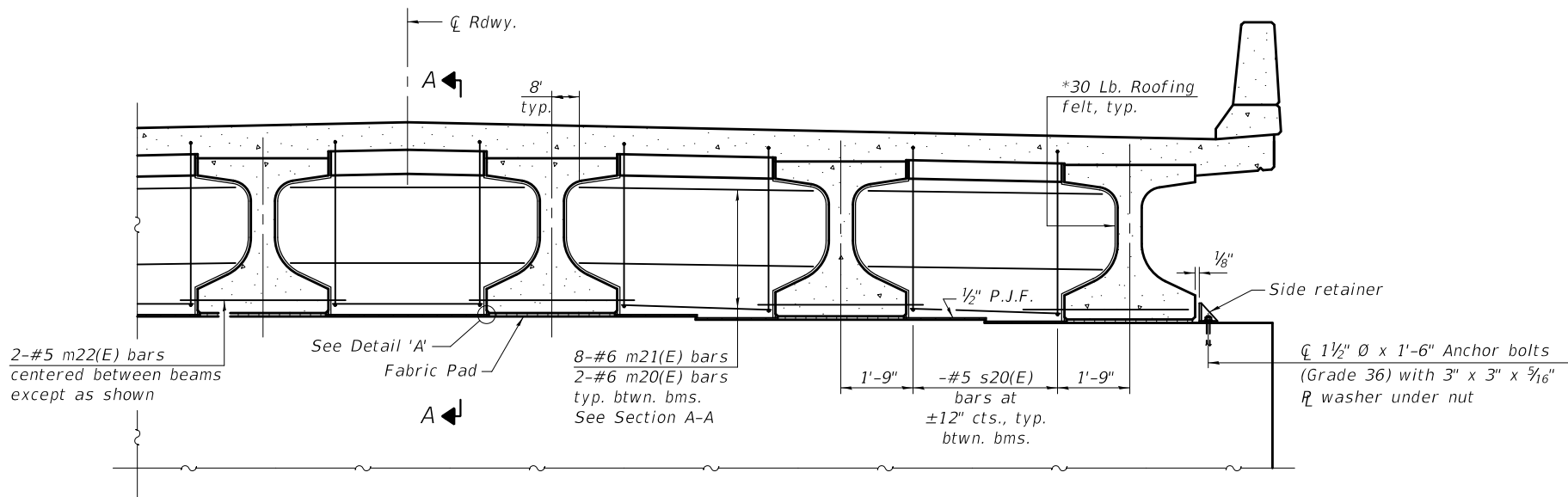
Notes:

- Reinforcement bars in diaphragm are billed with superstructure on sheet of .
- Concrete in diaphragm is included with Concrete Superstructure on sheet of .
- Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
- Cost of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar s20(E) see sheet of .
- Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
- Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

DFP-IL4554-0

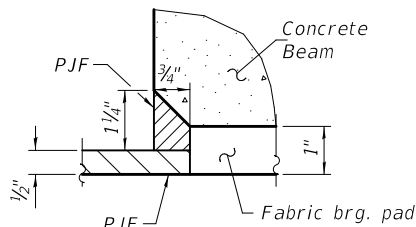
2-17-2017

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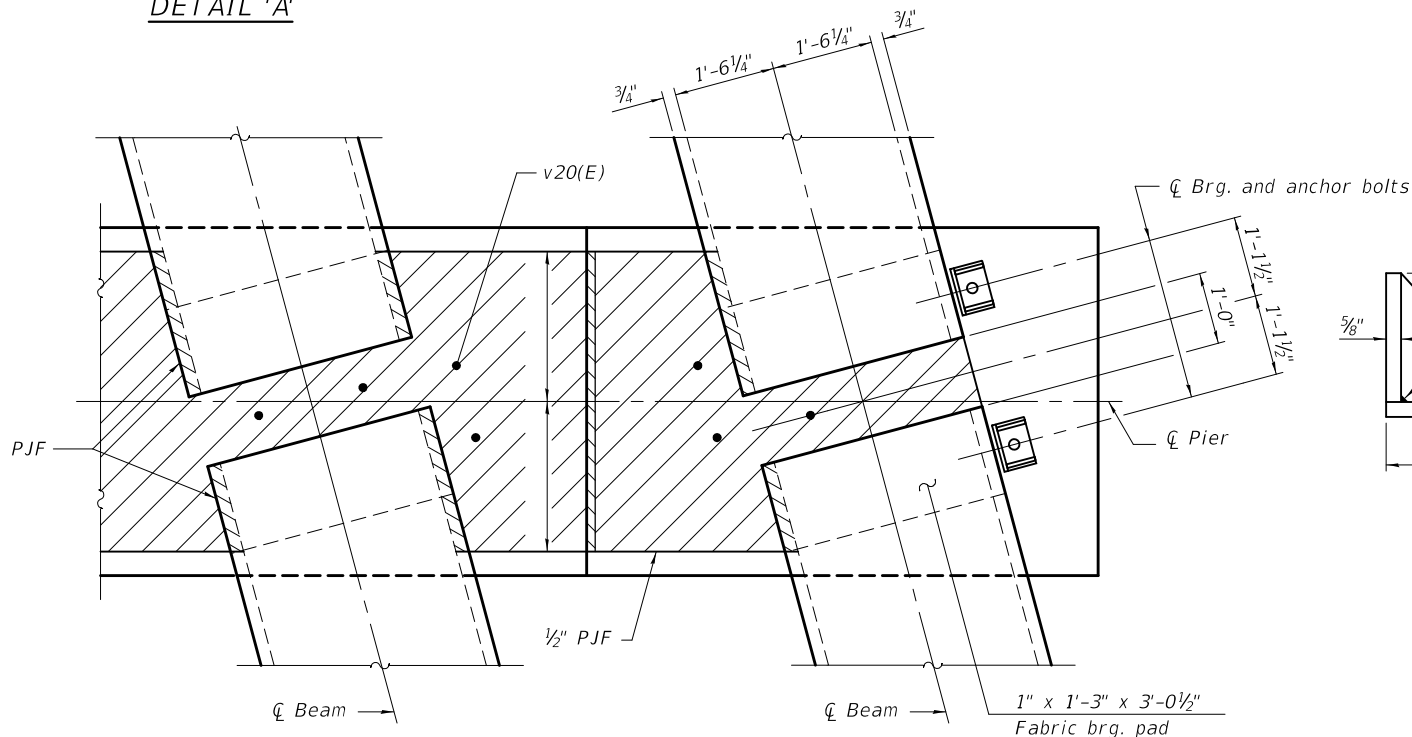


DIAPHRAGM AT PIER

*Bonded to sides of beams embedded into diaphragm.

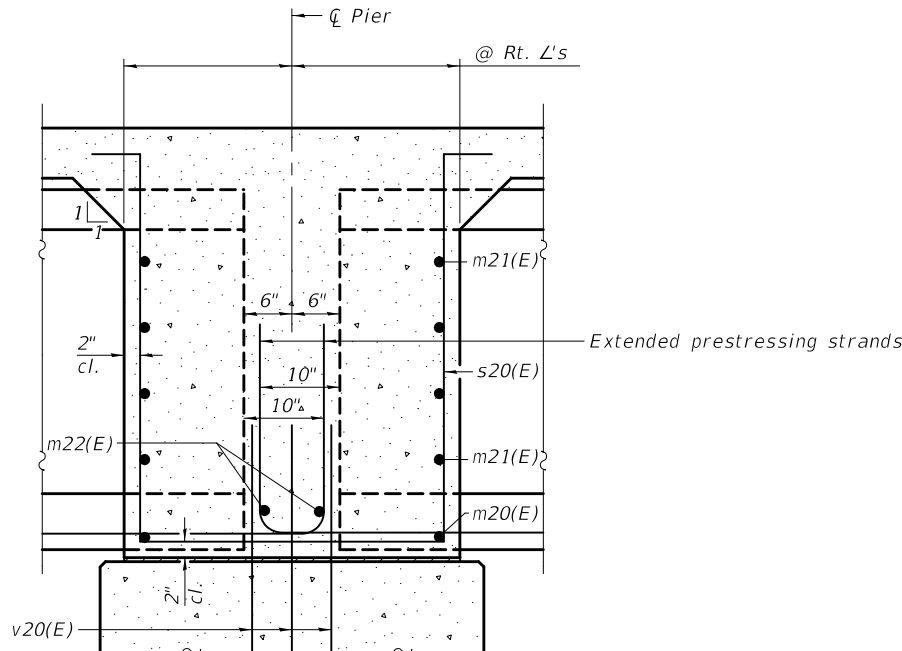


DETAIL 'A'



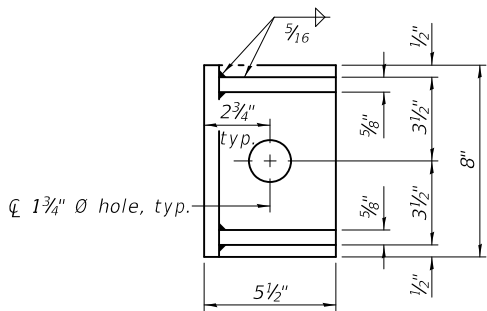
PLAN AT PIER

(Showing bearing pads and P.J.F. details)



SECTION A-A

(Dimensions along ϕ of beam except as shown)



SIDE RETAINER

(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.

Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet of .

Concrete in diaphragm is included with Concrete Superstructure on sheet of .

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Cost of side retainer and anchor bolts shall be included with Concrete Structures.

For details of bar s20(E) see sheet of .

The s20(E) bars shall be placed parallel to the beams.

Spacing for these bars shall be at right angles to the beams.

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.

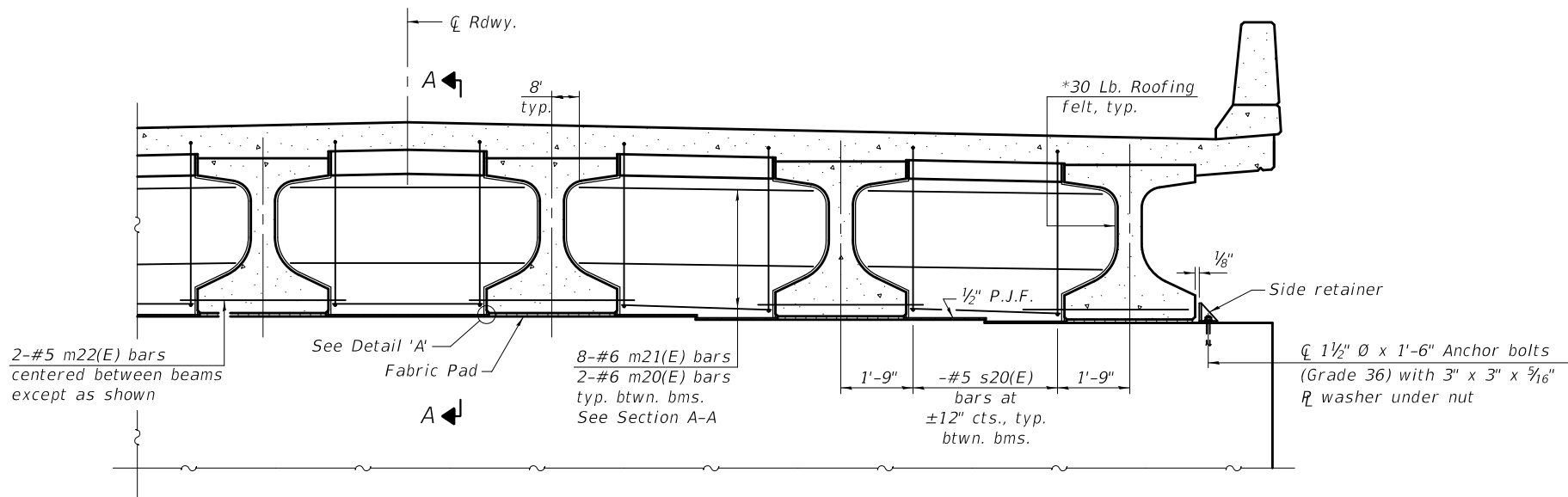
Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

DFP-IL4554-L

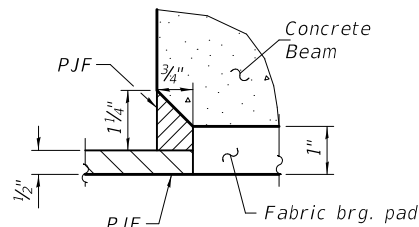
2-17-2017

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	PLOT DATE =	CHECKED -	REVISED -									
						CONTRACT NO.						
						ILLINOIS FED. AID PROJECT						

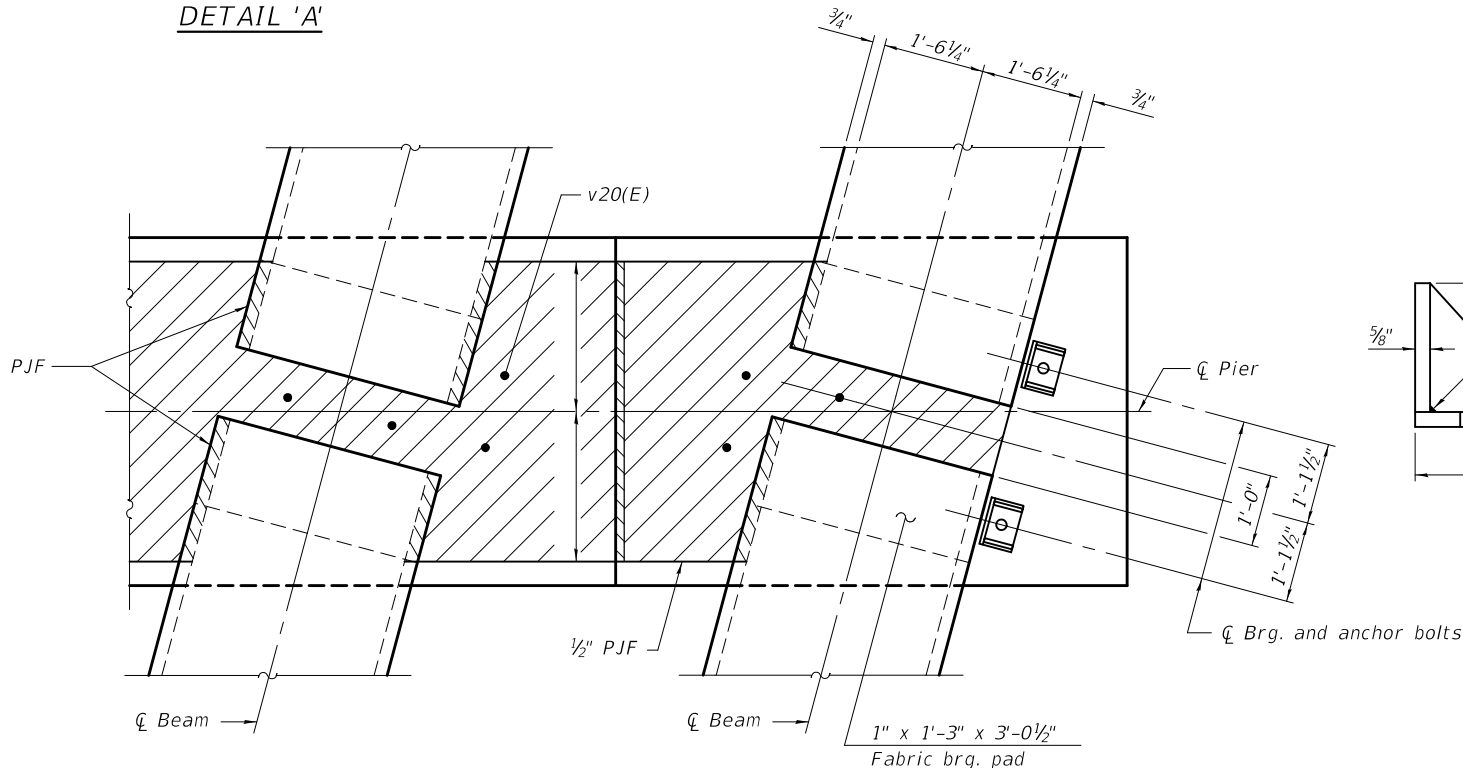


DIAPHRAGM AT PIER

*Bonded to sides of beams embedded into diaphragm.

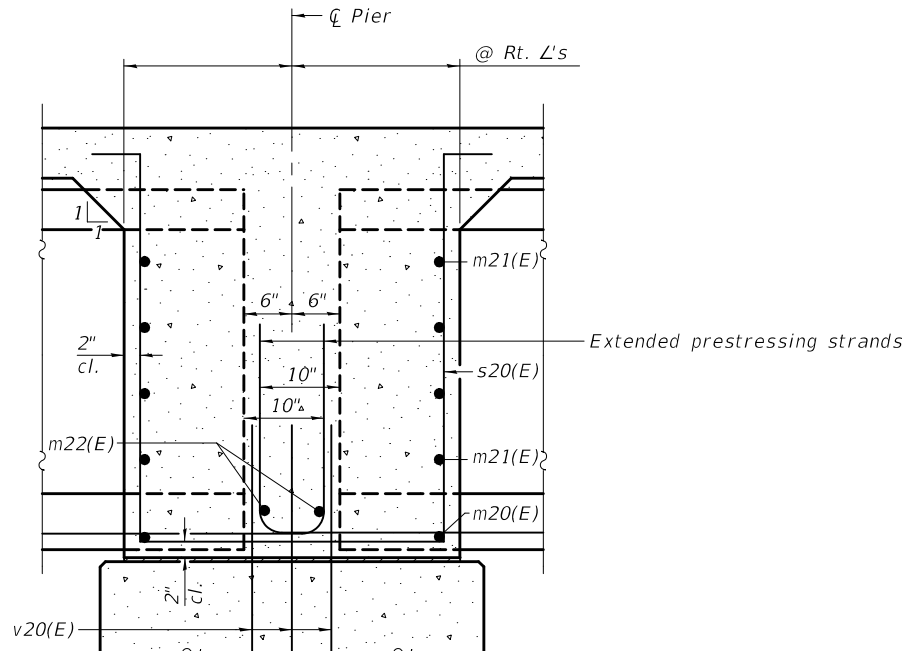


DETAIL 'A'



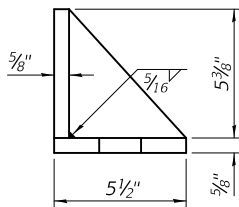
PLAN AT PIER

(Showing bearing pads and P.J.F. details)



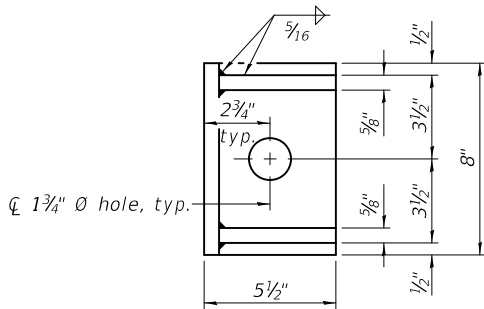
SECTION A-A

(Dimensions along ϕ of beam except as shown)



SIDE RETAINER

(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.



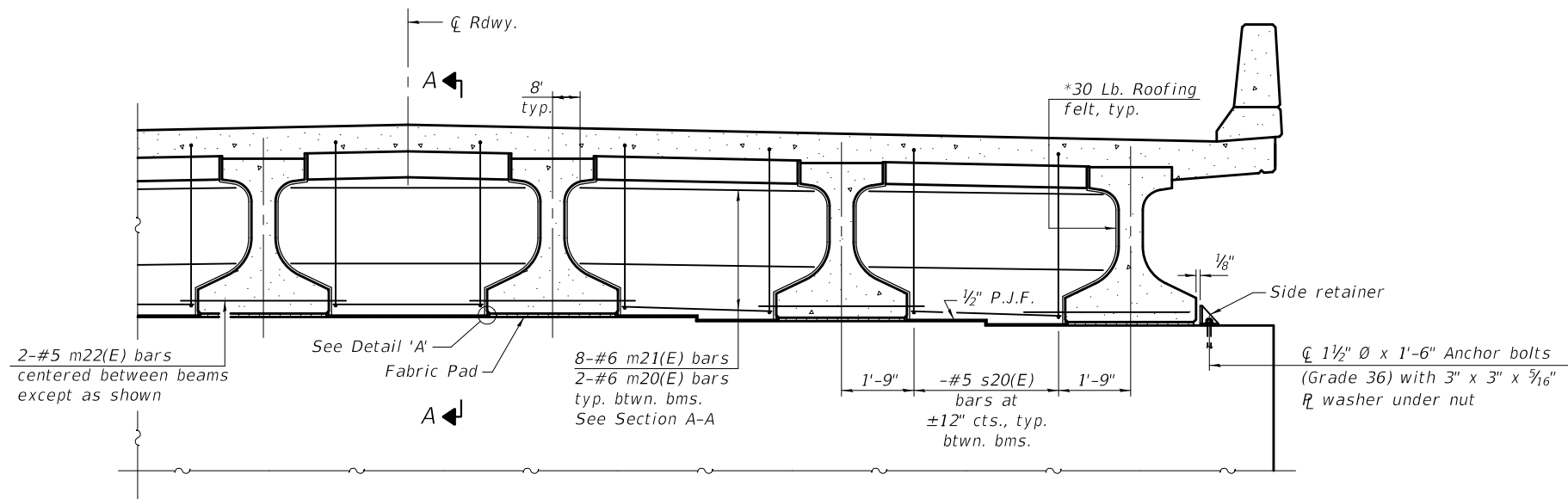
Notes:

- Reinforcement bars in diaphragm are billed with superstructure on sheet of .
- Concrete in diaphragm is included with Concrete Superstructure on sheet of .
- Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
- Cost of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar s20(E) see sheet of .
- The s20(E) bars shall be placed parallel to the beams.
- Spacing for these bars shall be at right angles to the beams.
- Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
- Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

DFP-IL4554-R

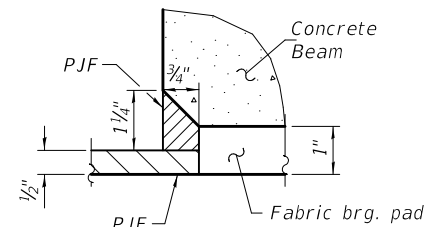
2-17-2017

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	PLOT SCALE =	DRAWN -	REVISED -							
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							CONTRACT NO.			
						ILLINOIS FED. AID PROJECT				

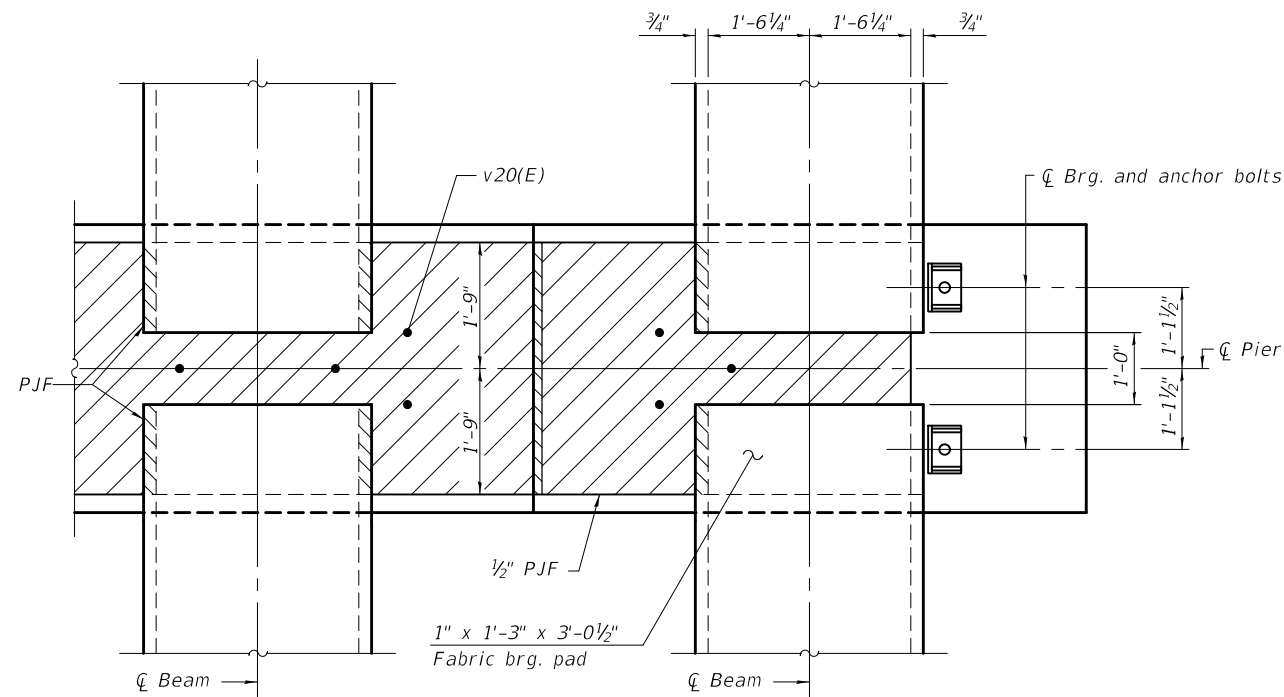


DIAPHRAGM AT PIER

*Bonded to sides of beams embedded into diaphragm.

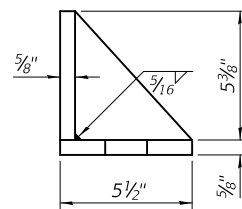


DETAIL 'A'



PLAN AT PIER

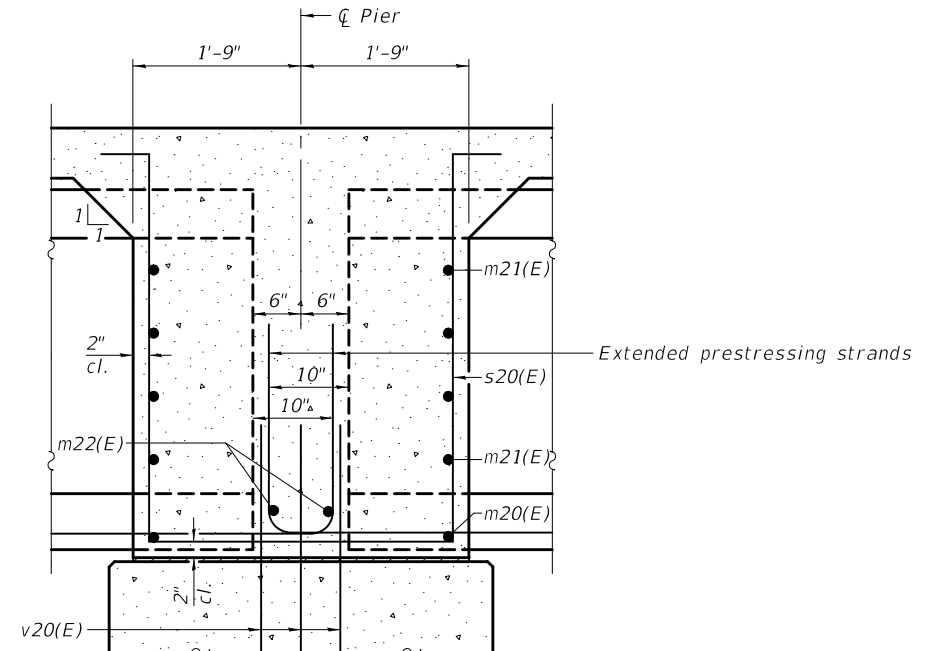
(Showing bearing pads and P.J.F. details)



1 3/4" Ø hole, typ.

SIDE RETAINER

(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.



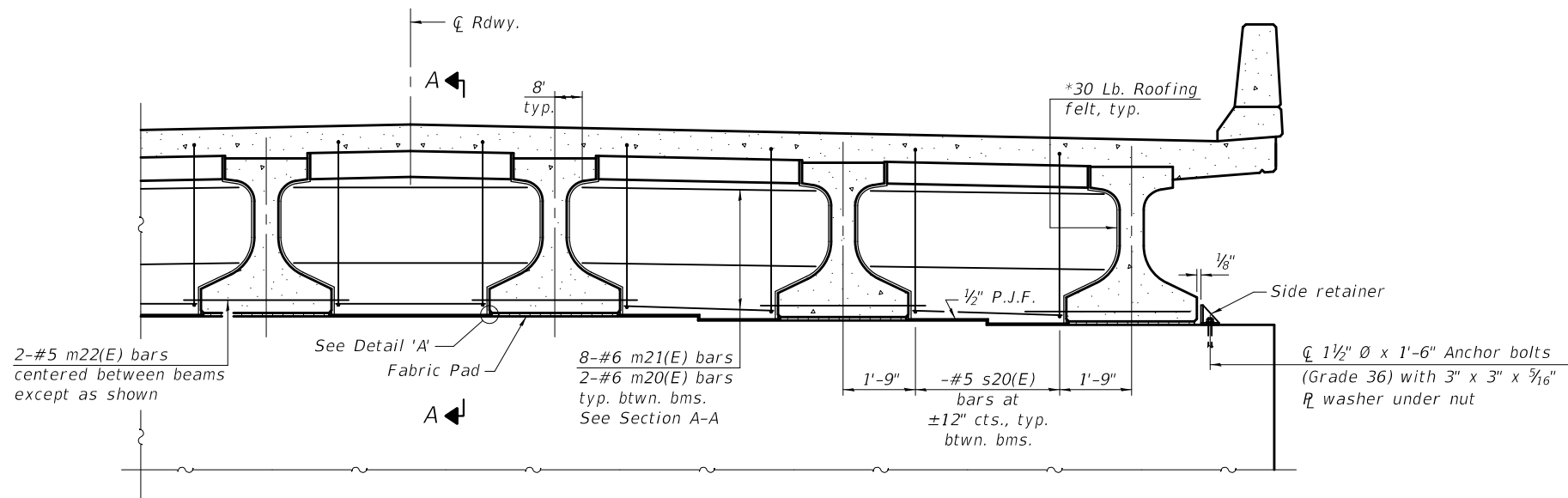
SECTION A-A

Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheet of .
Concrete in diaphragm is included with Concrete Superstructure on sheet of .
Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
Cost of side retainer and anchor bolts shall be included with Concrete Structures.
For details of bar s20(E) see sheet of .
Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

DFP-IL4554N-0

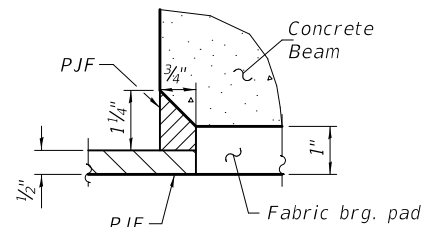
2-17-2017

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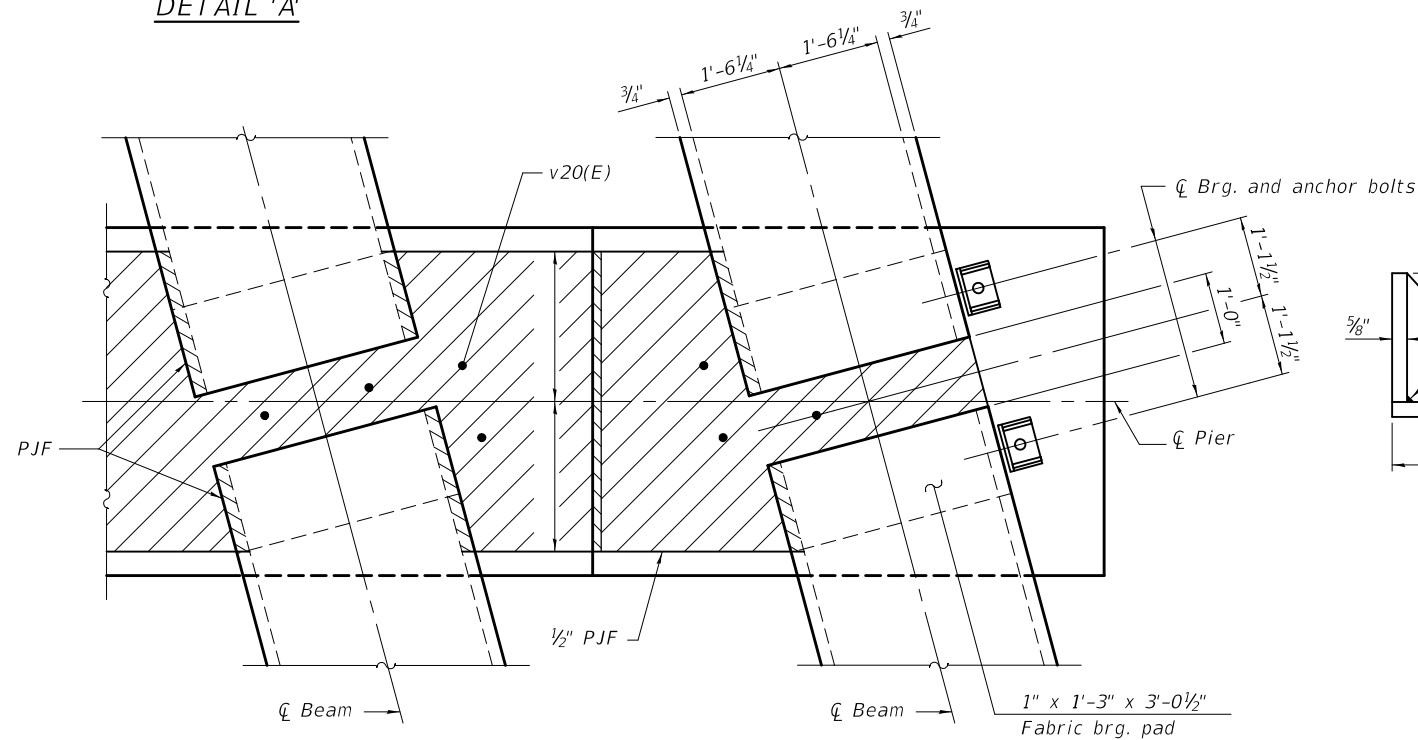


DIAPHRAGM AT PIER

*Bonded to sides of beams embedded into diaphragm.

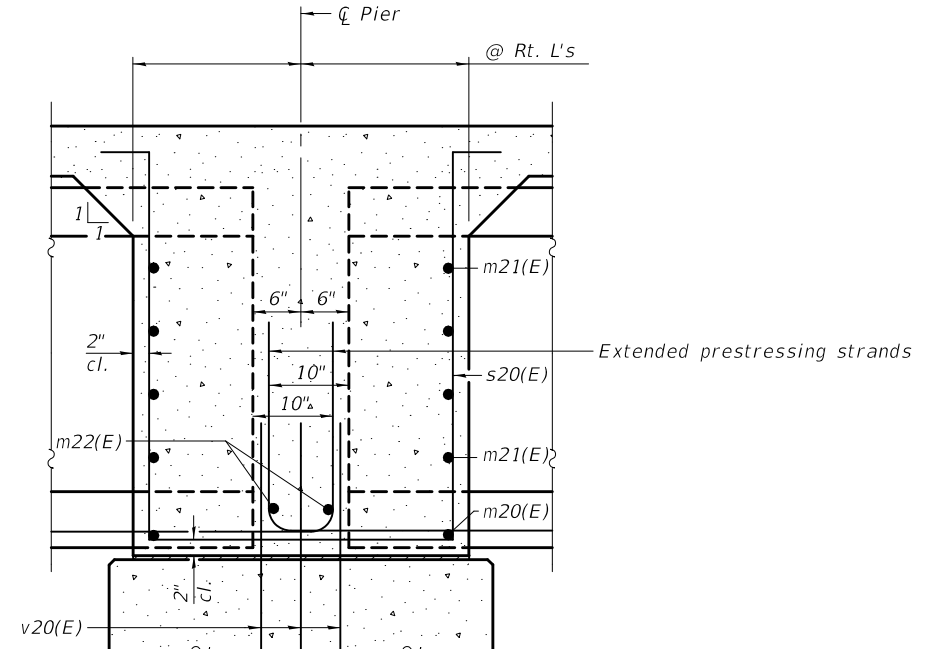


DETAIL 'A'



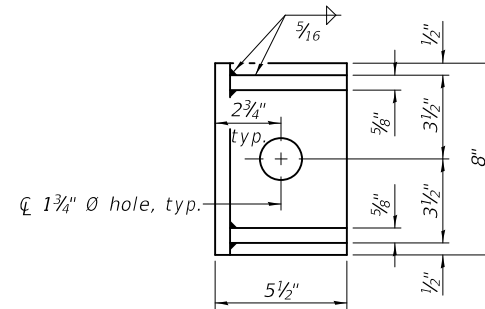
PLAN AT PIER

(Showing bearing pads and P.J.F. details)



SECTION A-A

(Dimensions along ϕ of beam except as shown)



SIDE RETAINER

(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.

Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet of .
Concrete in diaphragm is included with Concrete Superstructure on sheet of .

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
Cost of side retainer and anchor bolts shall be included with Concrete Structures.

For details of bar s20(E) see sheet of .

The s20(E) bars shall be placed parallel to the beams.

Spacing for these bars shall be at right angles to the beams.

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.

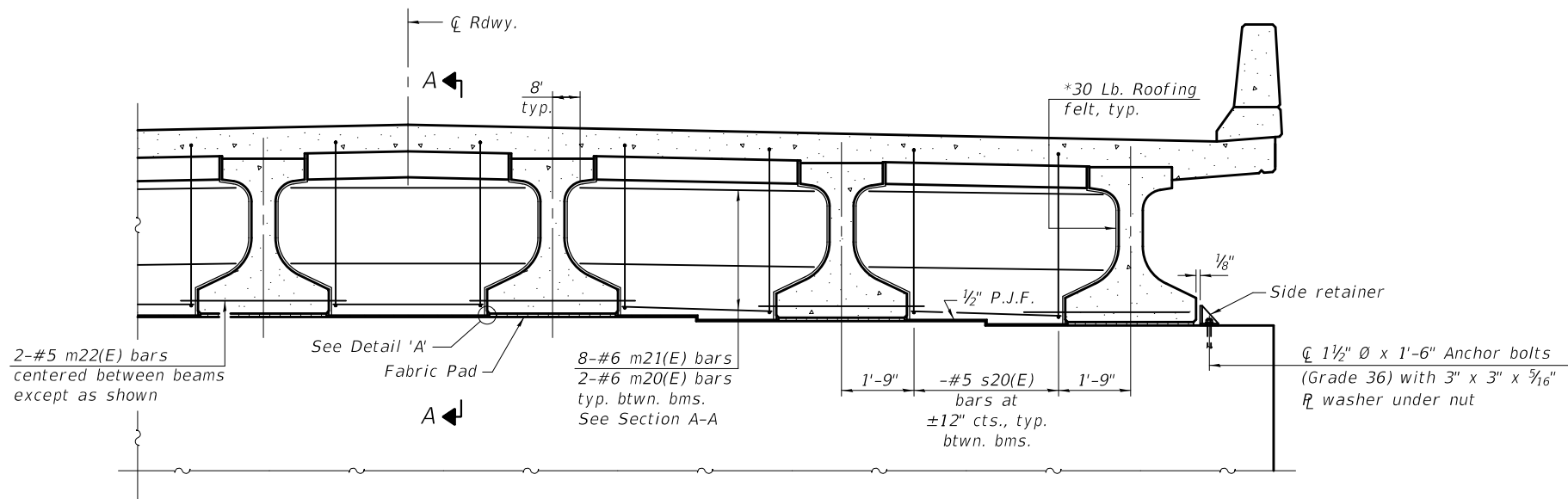
Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

DFP-IL4554N-L

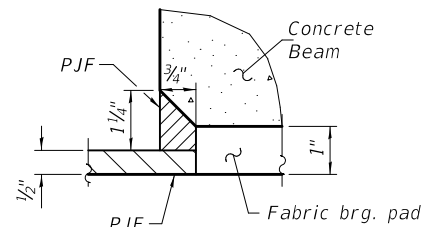
2-17-2017

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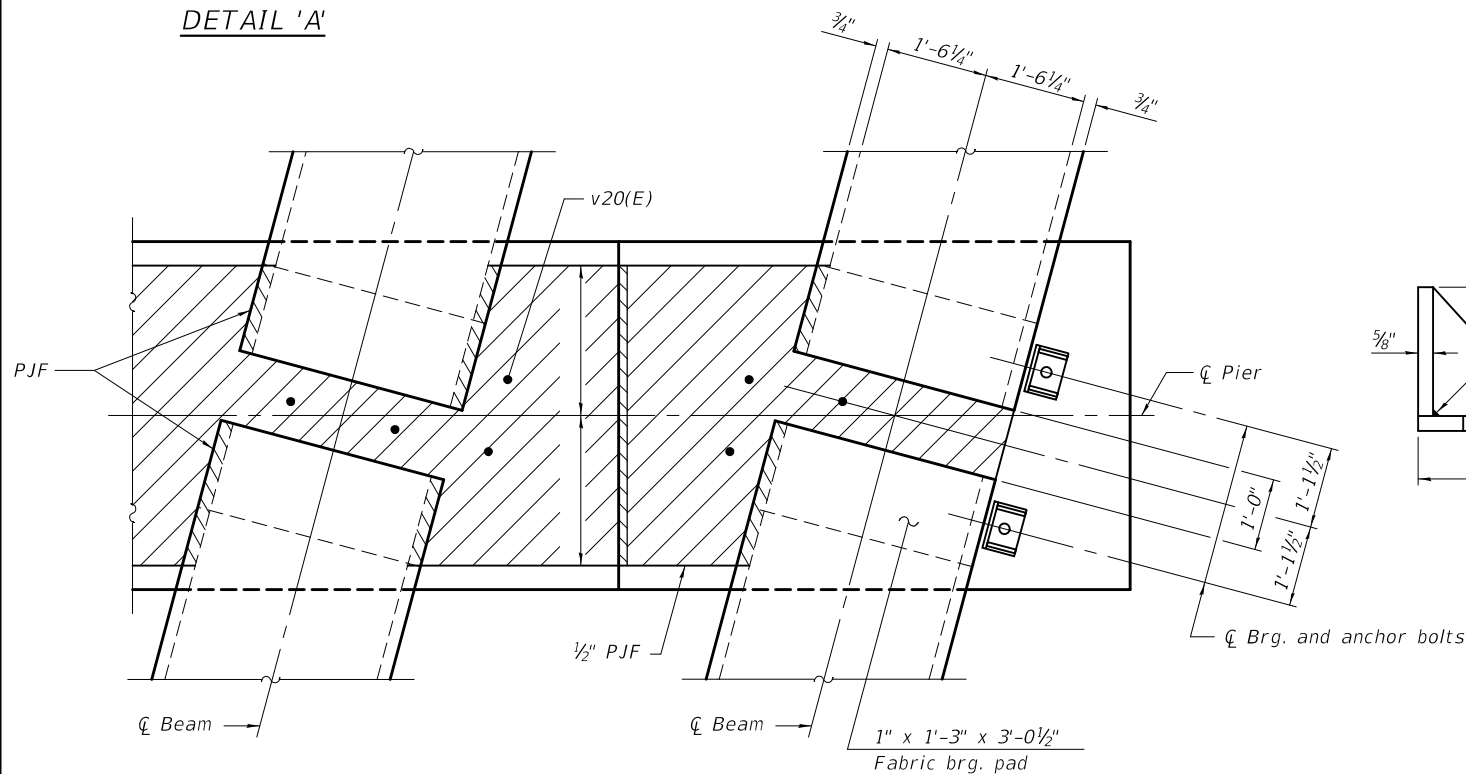


DIAPHRAGM AT PIER

*Bonded to sides of beams embedded into diaphragm.

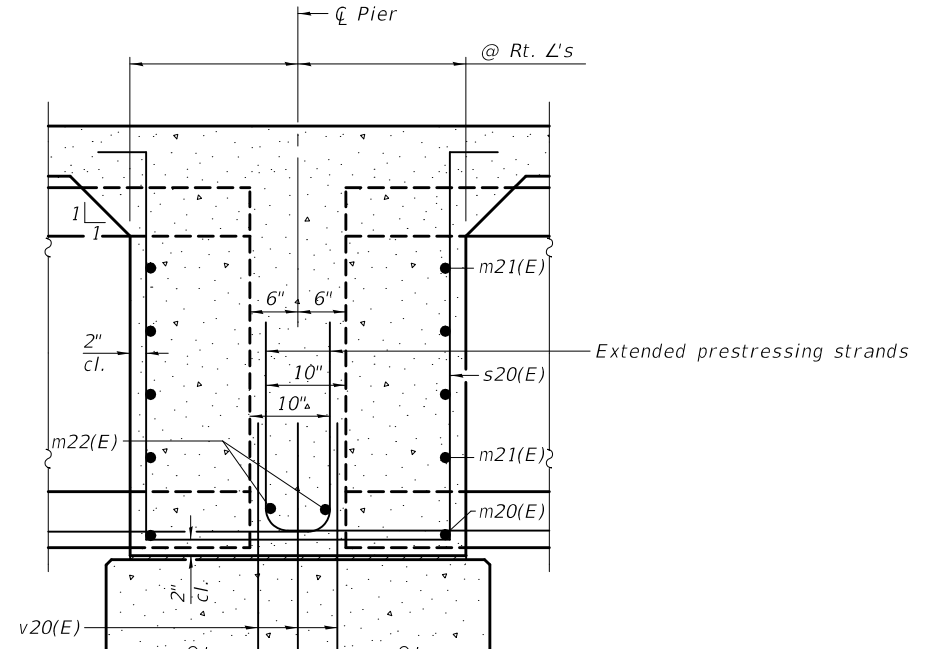


DETAIL 'A'



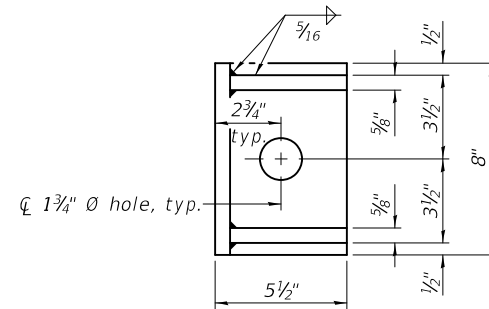
PLAN AT PIER

(Showing bearing pads and P.J.F. details)



SECTION A-A

(Dimensions along ℄ of beam except as shown)



SIDE RETAINER

(2 required each side of pier).
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet of .

Concrete in diaphragm is included with Concrete Superstructure on sheet of .

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Cost of side retainer and anchor bolts shall be included with Concrete Structures.

For details of bar s20(E) see sheet of .

The s20(E) bars shall be placed parallel to the beams.

Spacing for these bars shall be at right angles to the beams.

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.

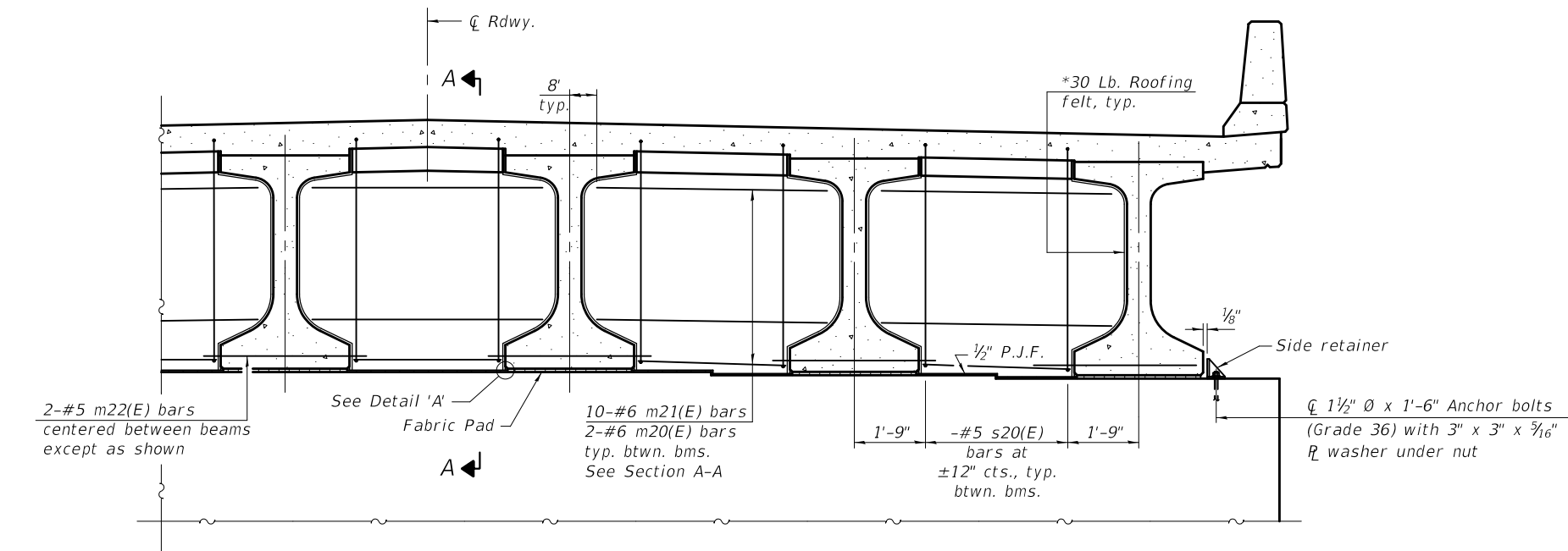
Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

DFP-IL4554N-R

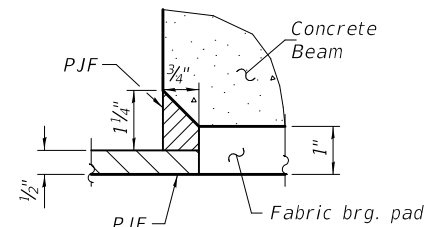
2-17-2017

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					ILLINOIS FED. AID PROJECT					

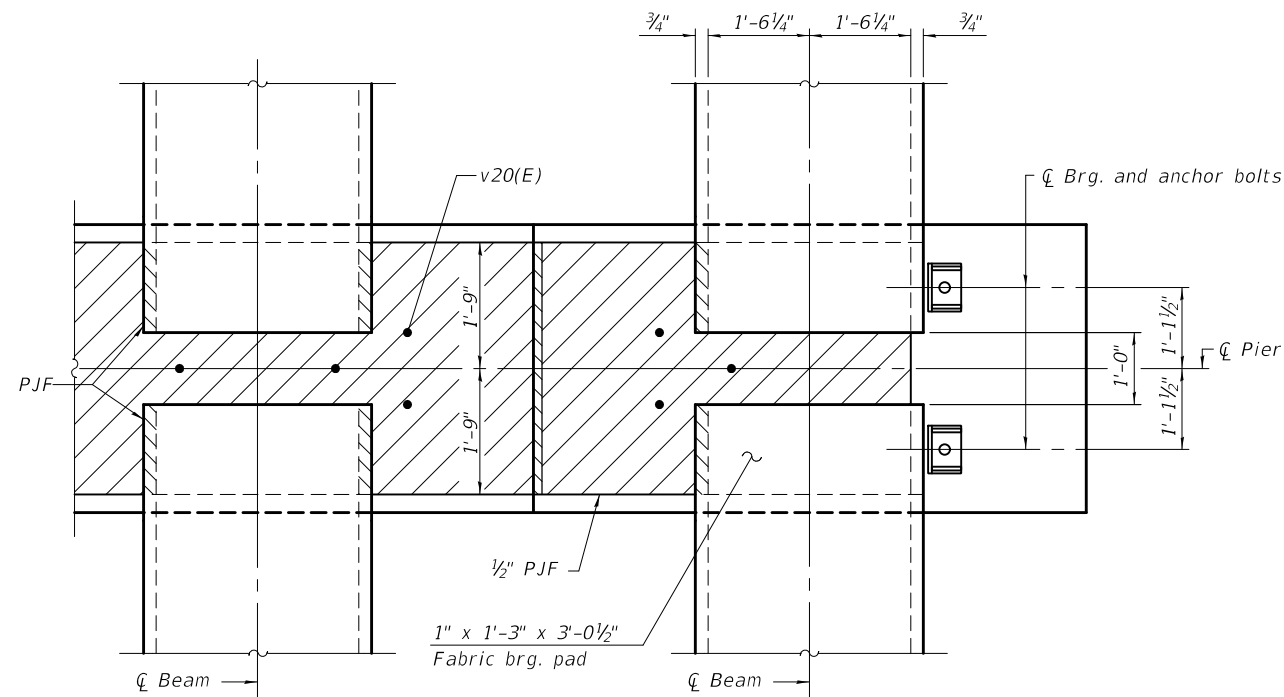


DIAPHRAGM AT PIER

*Bonded to sides of beams embedded into diaphragm.

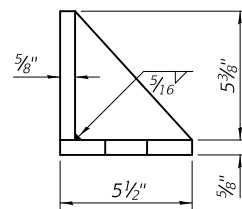


DETAIL 'A'



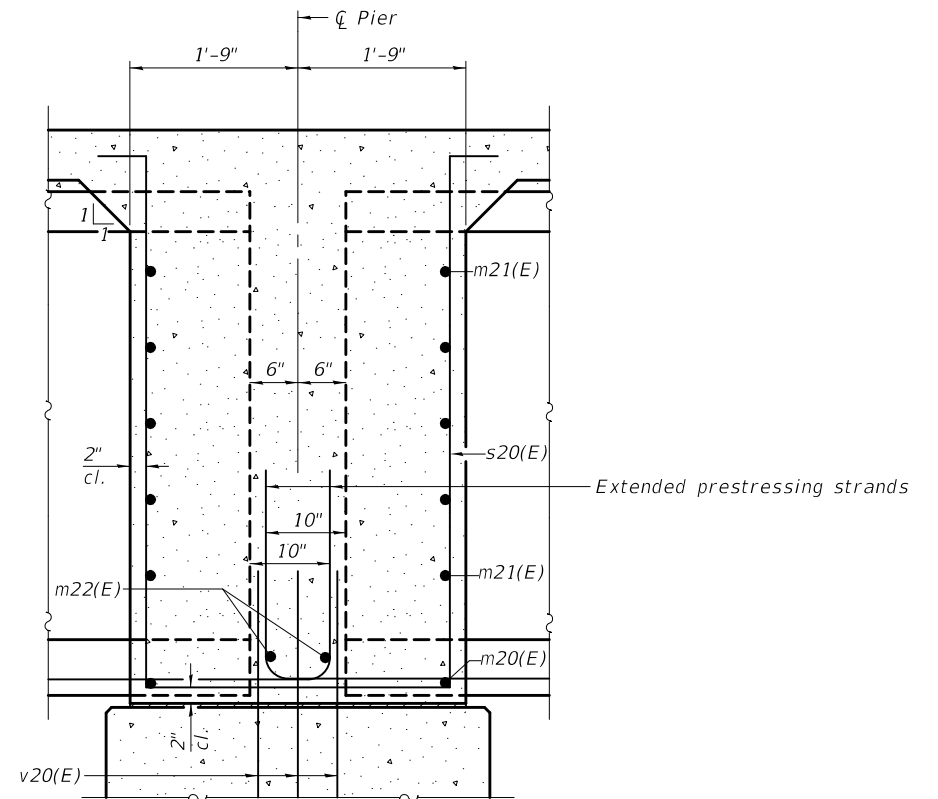
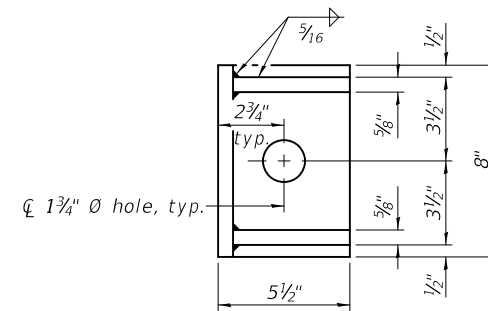
PLAN AT PIER

(Showing bearing pads and P.J.F. details)



SIDE RETAINER

(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.



SECTION A-A

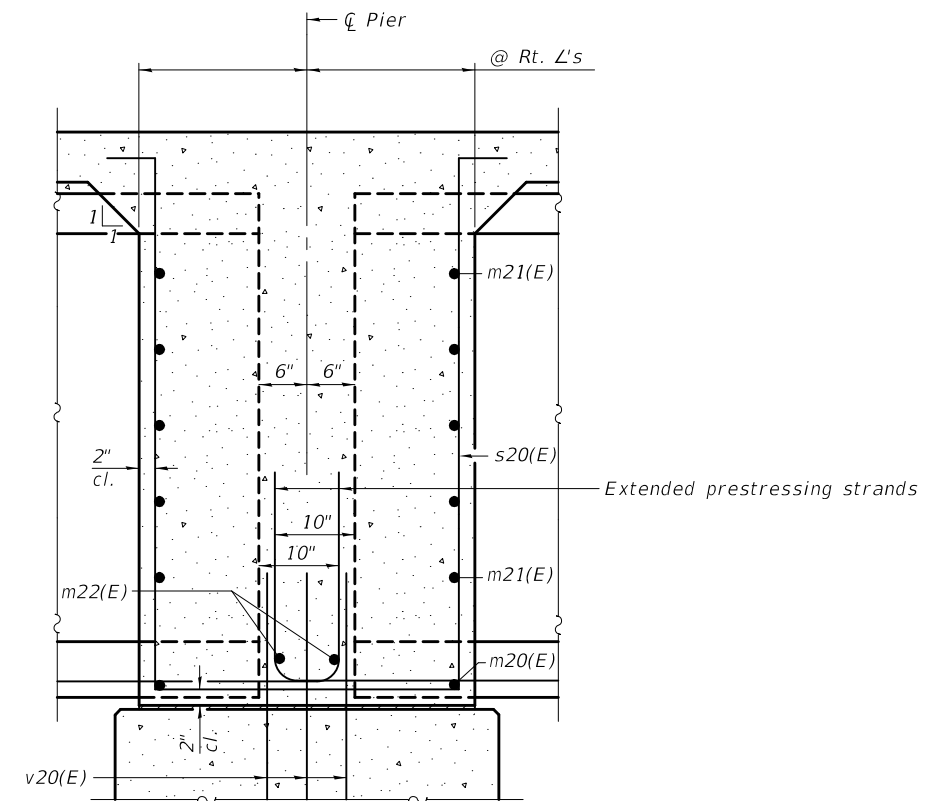
Notes:

- Reinforcement bars in diaphragm are billed with superstructure on sheet of .
- Concrete in diaphragm is included with Concrete Superstructure on sheet of .
- Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
- Cost of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar s20(E) see sheet of .
- Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
- Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

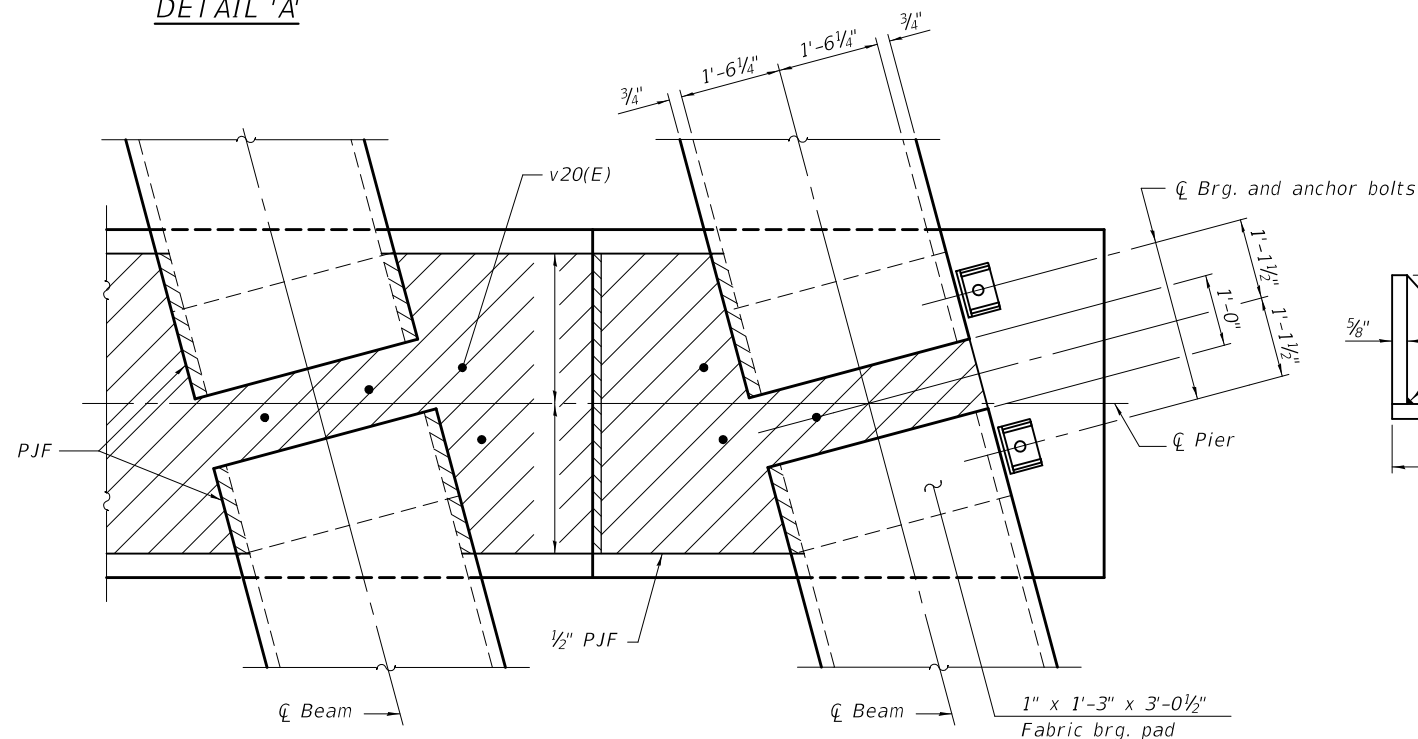
DFP-IL6372-0

2-17-2017

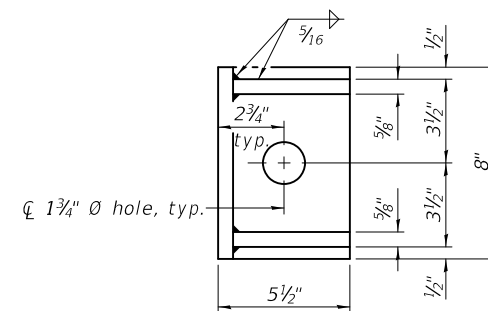
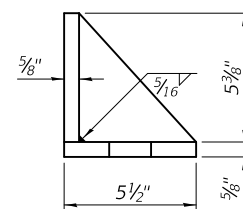
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	PLOT DATE =	DRAWN -	REVISED -					CONTRACT NO.		
		CHECKED -	REVISED -					ILLINOIS FED. AID PROJECT		



SECTION A-A
(Dimensions along ζ of beam except as shown)

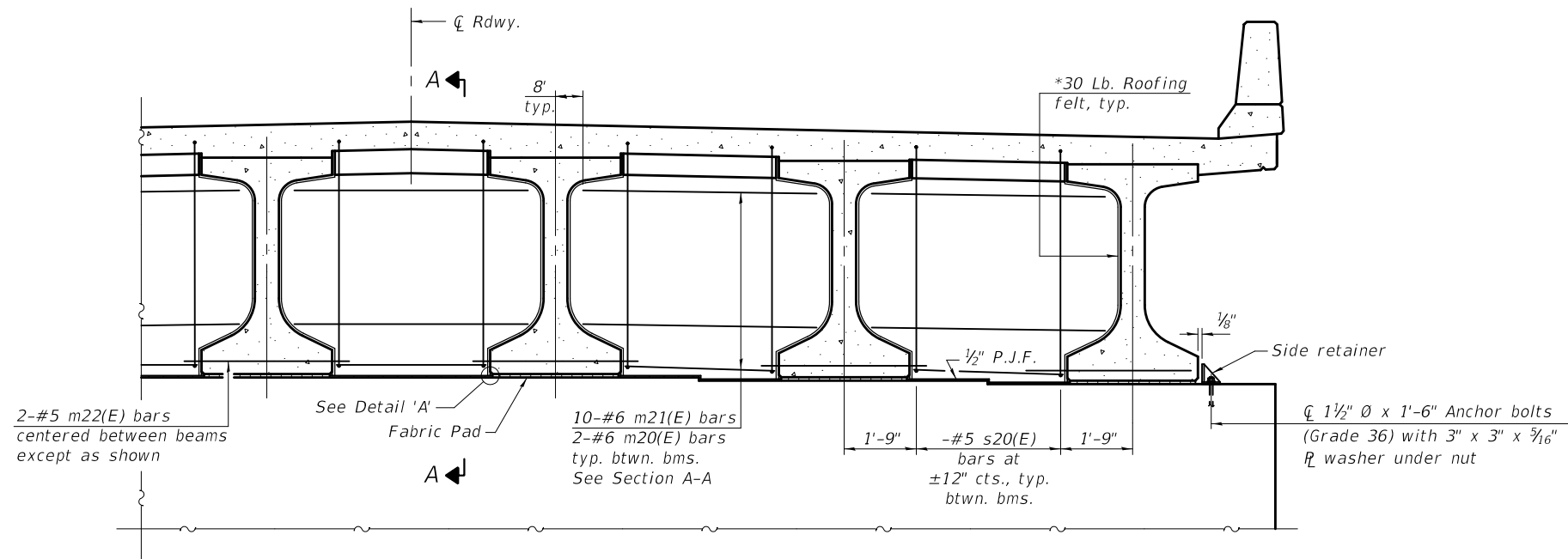


SIDE RETAINER
(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.



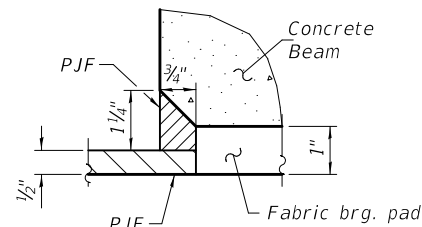
Notes:

- Reinforcement bars in diaphragm are billed with superstructure on sheet of .
- Concrete in diaphragm is included with Concrete Superstructure on sheet of .
- Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
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- The s20(E) bars shall be placed parallel to the beams.
- Spacing for these bars shall be at right angles to the beams.
- Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
- Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

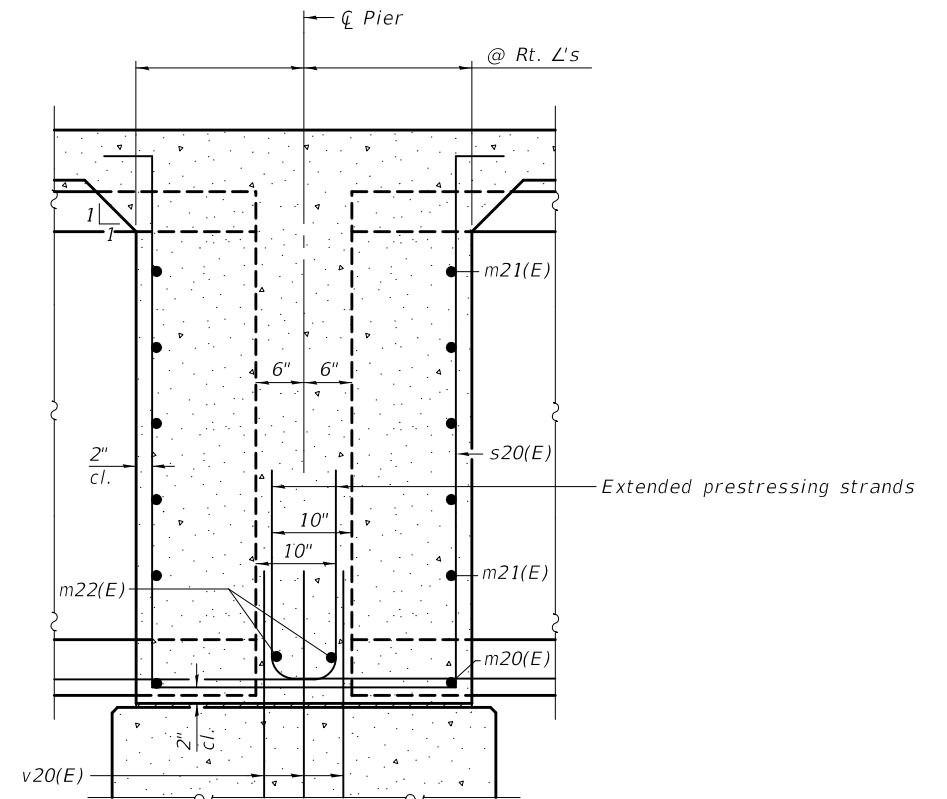


DIAPHRAGM AT PIER

*Bonded to sides of beams embedded into diaphragm.

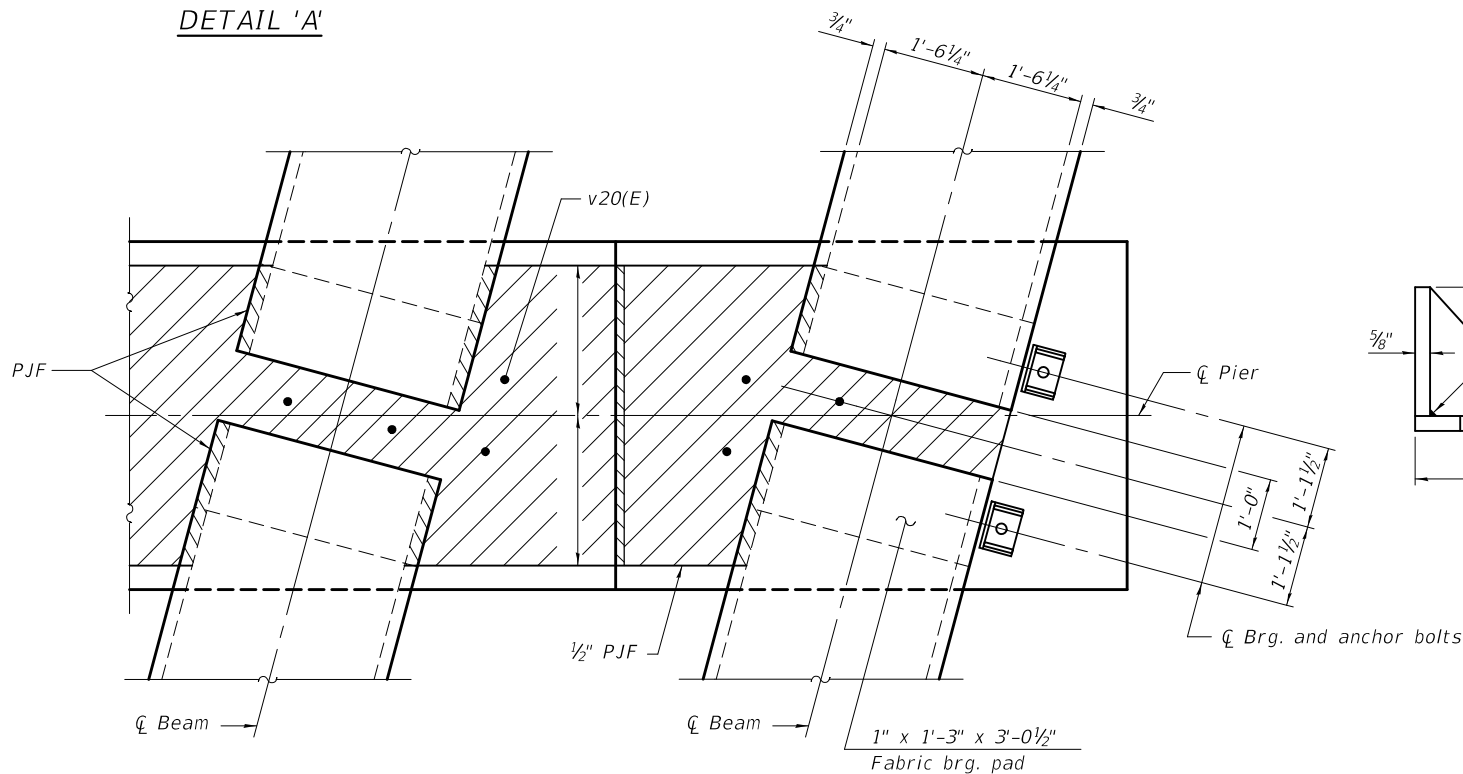


DETAIL 'A'



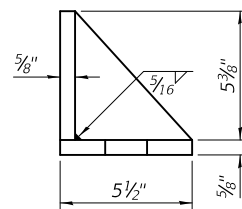
SECTION A-A

(Dimensions along ℄ of beam except as shown)



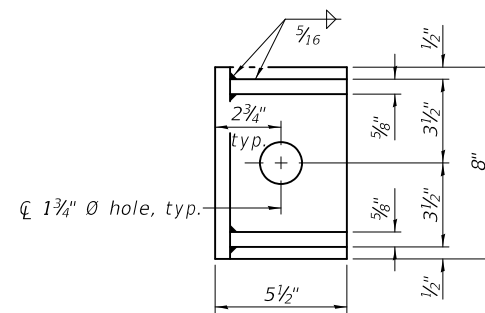
PLAN AT PIER

(Showing bearing pads and P.J.F. details)



SIDE RETAINER

(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.



Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet of .

Concrete in diaphragm is included with Concrete Superstructure on sheet of .

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Cost of side retainer and anchor bolts shall be included with Concrete Structures.

For details of bar s20(E) see sheet of .

The s20(E) bars shall be placed parallel to the beams.

Spacing for these bars shall be at right angles to the beams.

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.

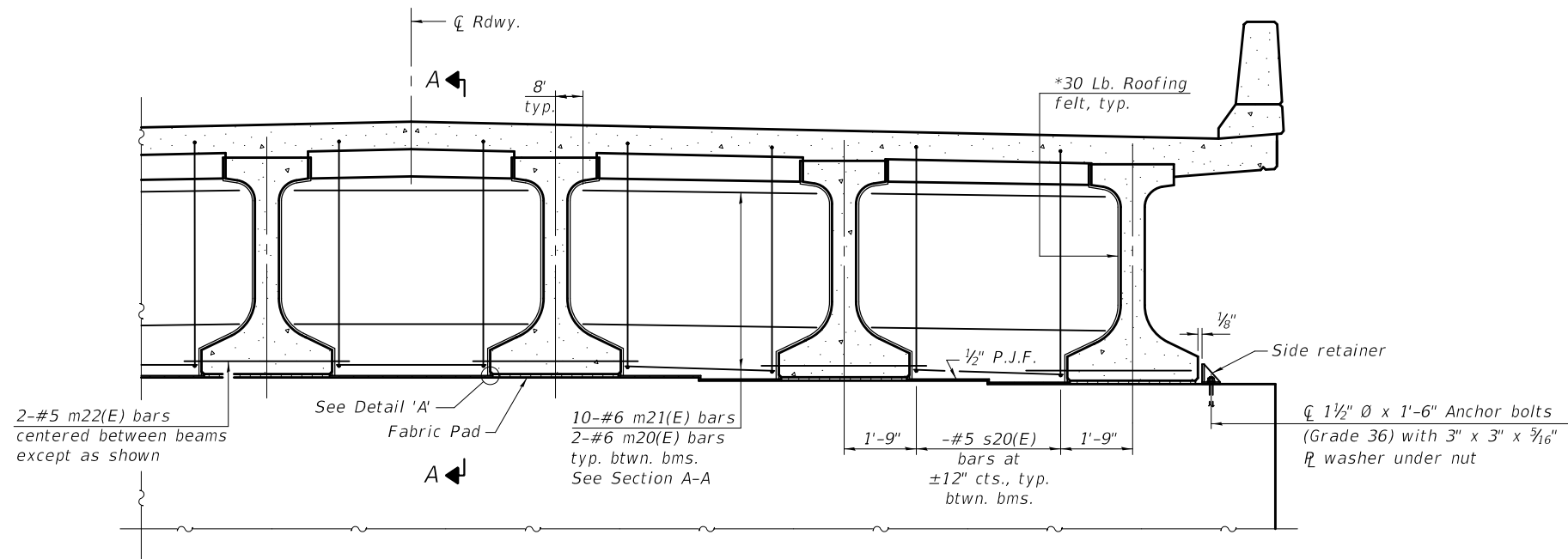
Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

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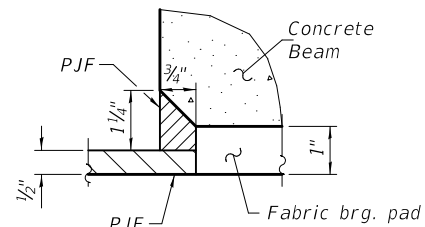
2-17-2017

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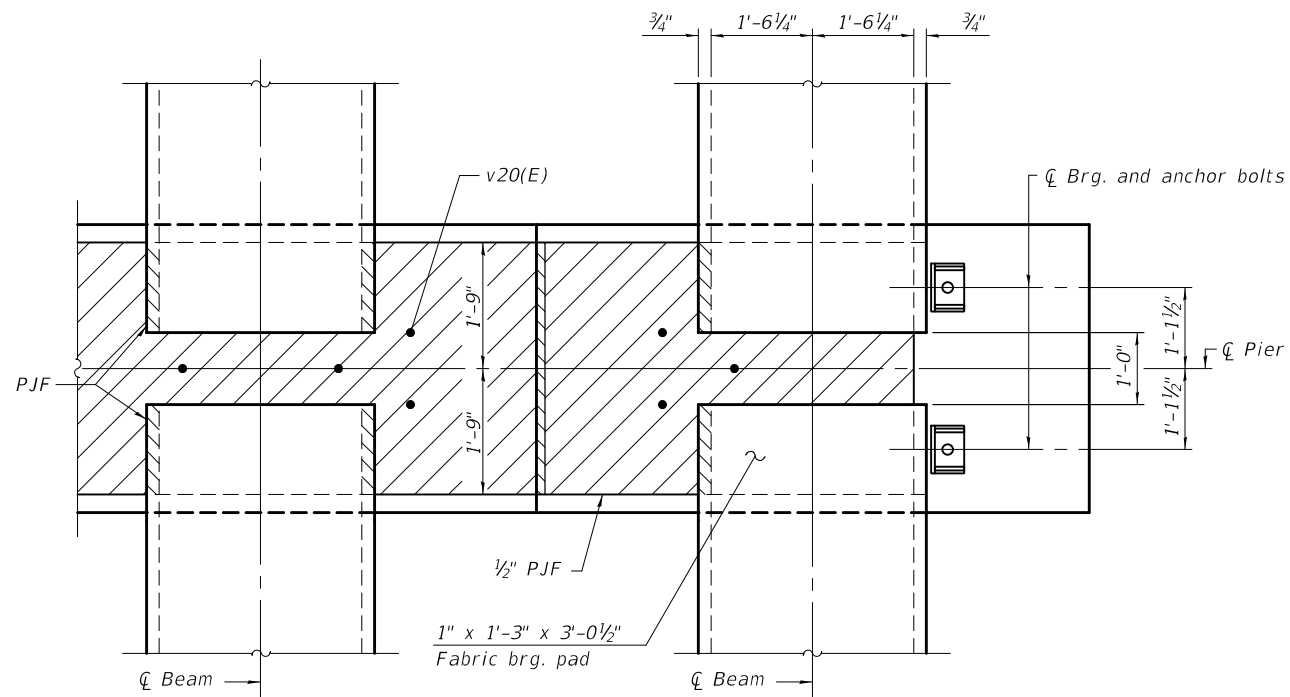


DIAPHRAGM AT PIER

*Bonded to sides of beams embedded into diaphragm.

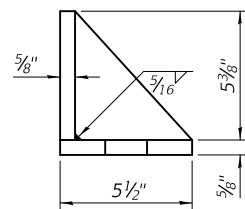


DETAIL 'A'



PLAN AT PIER

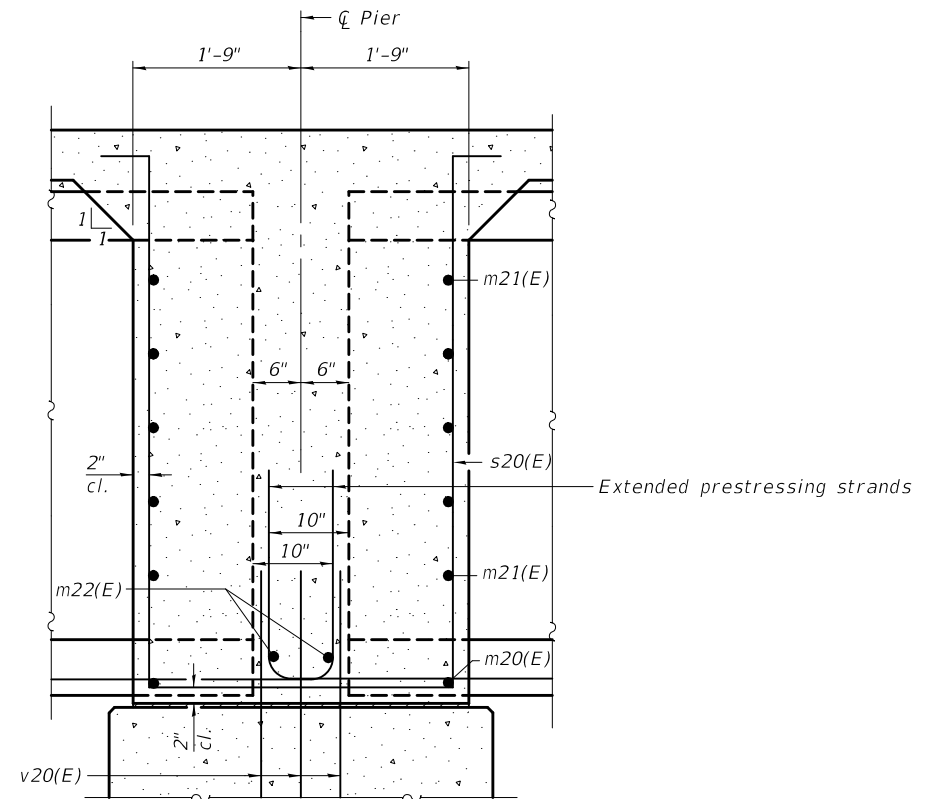
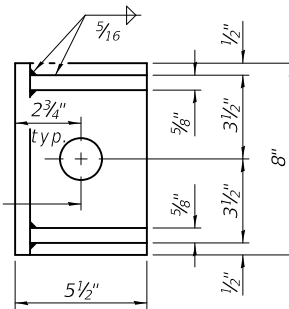
(Showing bearing pads and P.J.F. details)



1 3/4" Ø hole, typ.

SIDE RETAINER

(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.



SECTION A-A

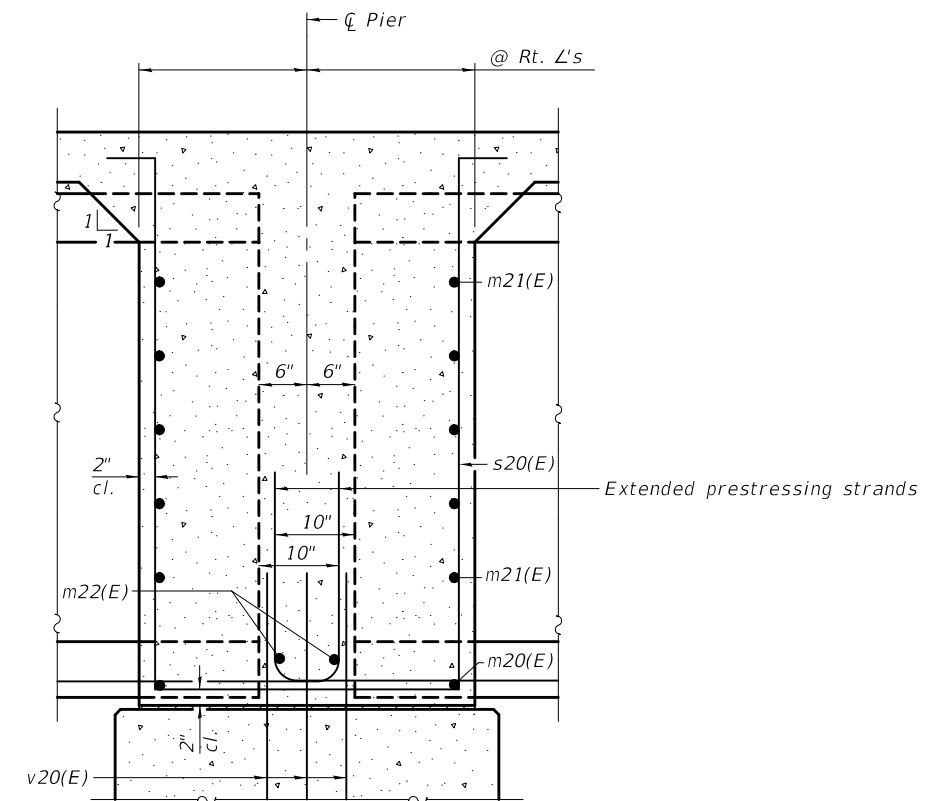
Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet of .
Concrete in diaphragm is included with Concrete Superstructure on sheet of .
Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
Cost of side retainer and anchor bolts shall be included with Concrete Structures.
For details of bar s20(E) see sheet of .
Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

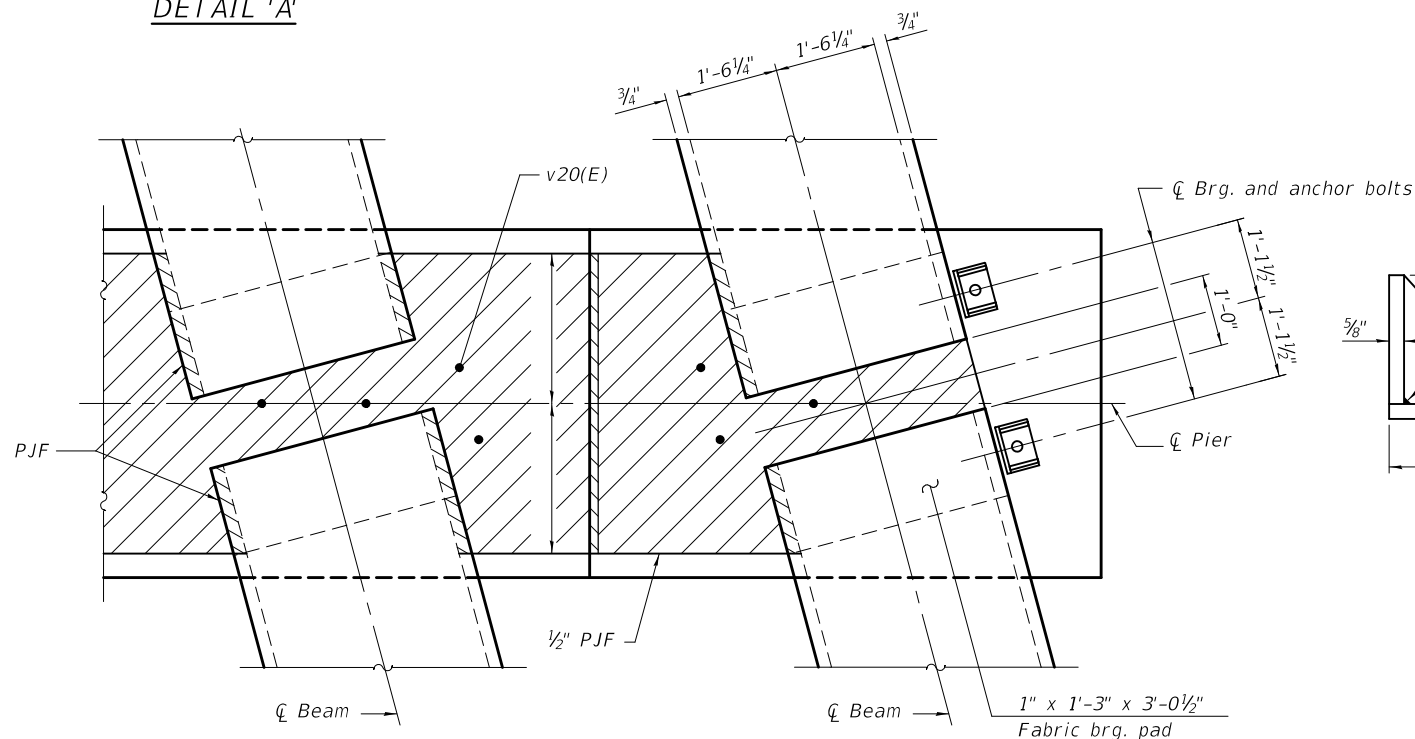
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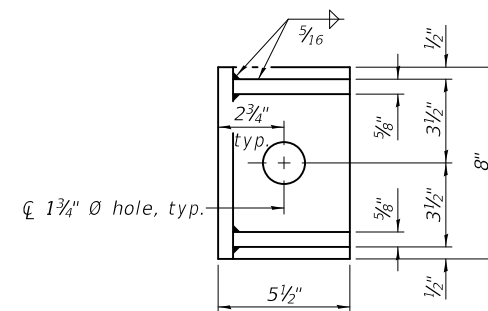
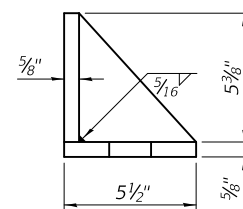
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SECTION A-A
(Dimensions along ζ of beam except as shown)

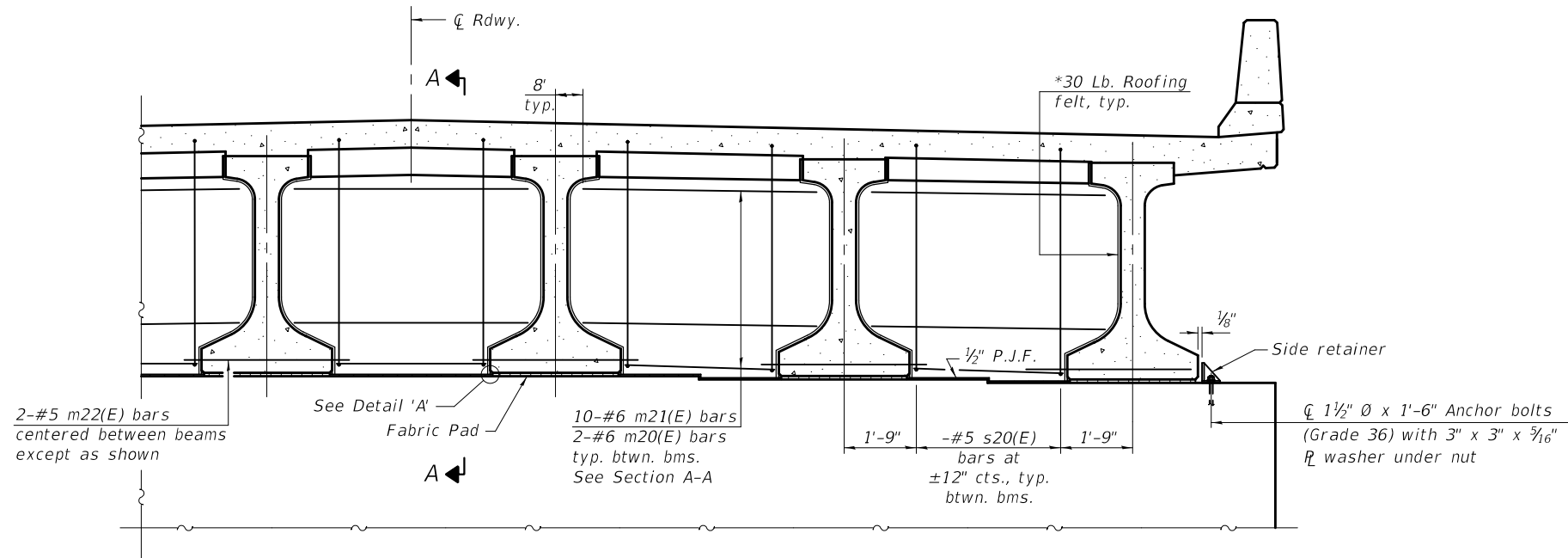


SIDE RETAINER
(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.



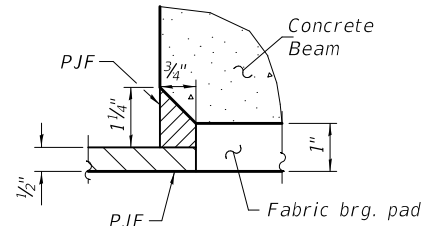
Notes:

- Reinforcement bars in diaphragm are billed with superstructure on sheet of .
- Concrete in diaphragm is included with Concrete Superstructure on sheet of .
- Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
- Cost of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar s20(E) see sheet of .
- The s20(E) bars shall be placed parallel to the beams.
- Spacing for these bars shall be at right angles to the beams.
- Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
- Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

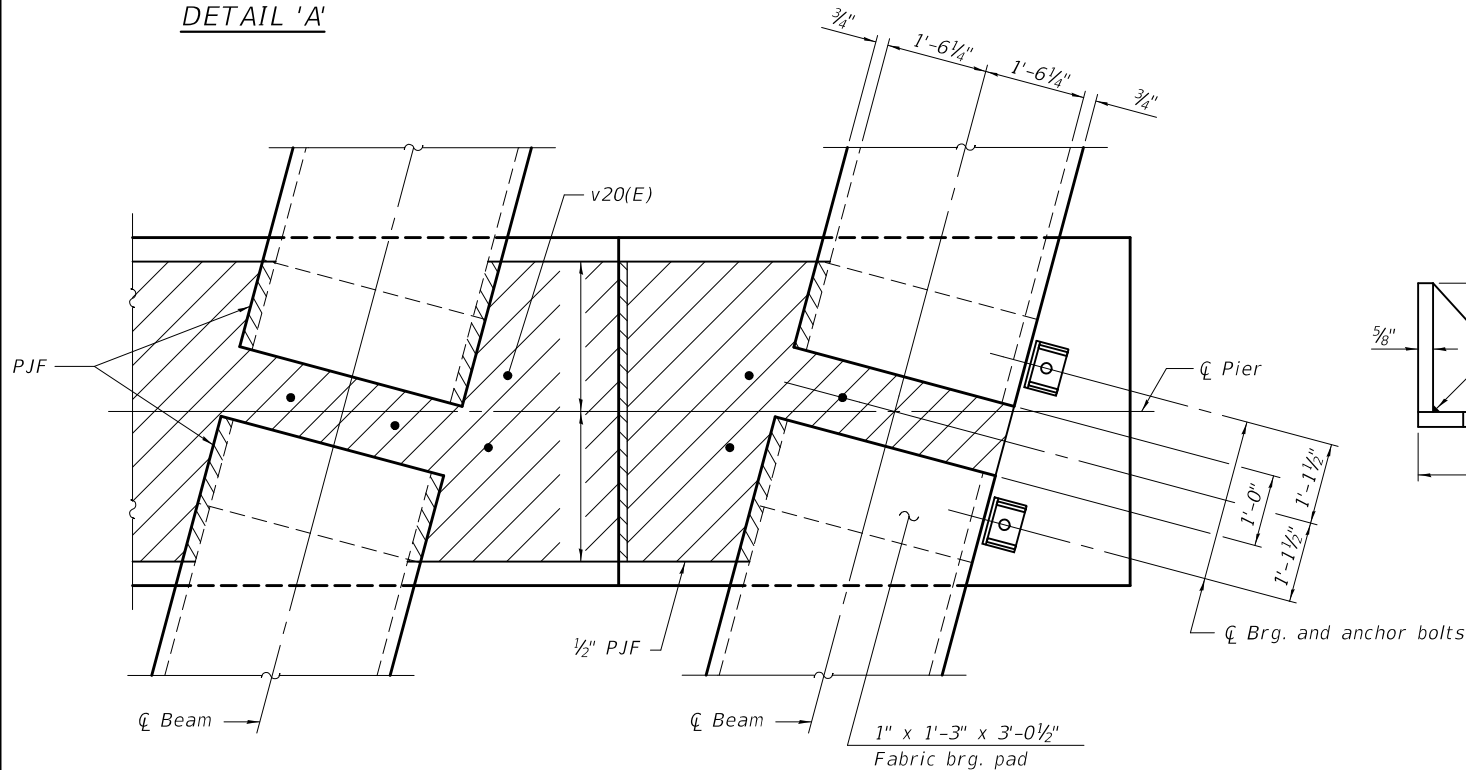


DIAPHRAGM AT PIER

*Bonded to sides of beams embedded into diaphragm.

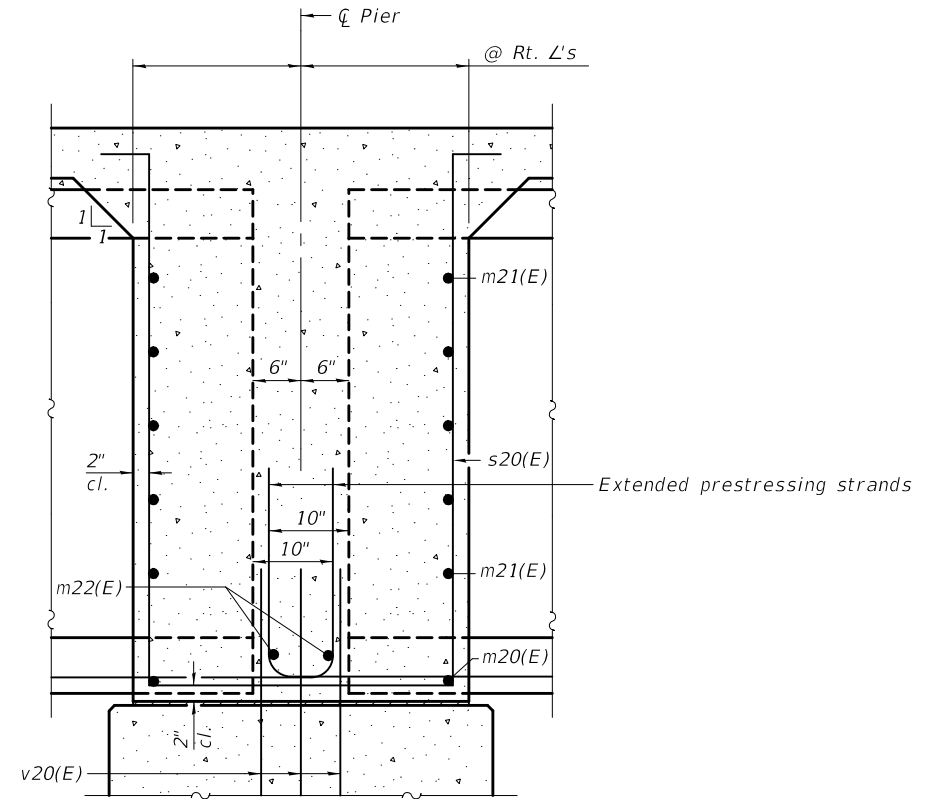


DETAIL 'A'



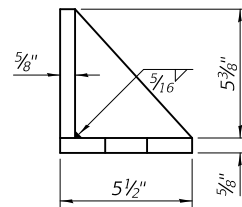
PLAN AT PIER

(Showing bearing pads and P.J.F. details)



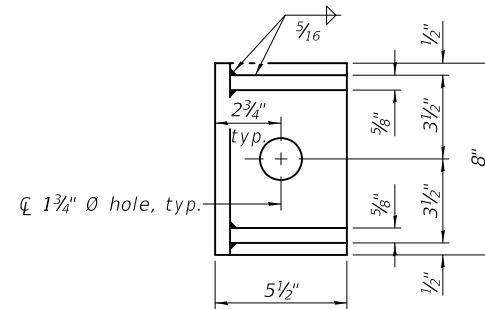
SECTION A-A

(Dimensions along C of beam except as shown)



SIDE RETAINER

(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.



Notes:

- Reinforcement bars in diaphragm are billed with superstructure on sheet of .
- Concrete in diaphragm is included with Concrete Superstructure on sheet of .
- Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
- Cost of side retainer and anchor bolts shall be included with Concrete Structures.
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